SONY

3-097-069-**13** (1)

Digital Photo Printer

DPP-FP70/FP90

Before you begin

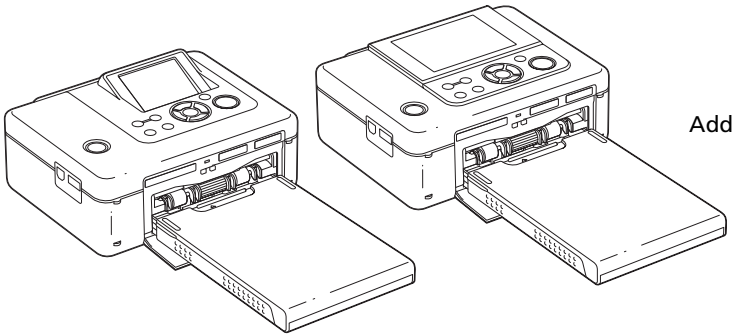
Making various printing

Printing from a PictBridge camera or external device

Printing from a PC

Troubleshooting

Additional information



Operating Instructions

Before operating this unit, please read "Read This First" supplied and this manual "Operating Instructions" thoroughly and retain them for future reference.

Owner's Record

The model and serial numbers are located on the bottom. Record the serial number in the space provided below. Refer to these numbers whenever you call upon your Sony dealer regarding this product.

Model No. DPP-FP70/FP90

Serial No. _____

SUPER COAT 2 MEMORY STICK ™ PictBridge

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Please read the supplied "Read This First".

WARNING

To reduce fire or shock hazard, do not expose the unit to rain or moisture.

For the customers in the U.S.A.

CAUTION

You are cautioned that any changes or modifications not expressly approved in this manual could void your authority to operate this equipment.

If you have any questions about this product, you may call:

Sony Customer Information Services Center

1-800-222-SONY (7669)

The number below is for the FCC related matters only.

Regulatory Information

Declaration of Conformity

Trade Name: SONY
Model No.: DPP-FP70
Responsible Party:
Sony Electronics Inc.
Address: 16530 Via Esprillo,
San Diego, CA 92127 U.S.A.
Telephone No.: 858-942-2230

This device complies with part 15 of the FCC Rules. Operation is subject to the following two conditions:

(1) this device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

Declaration of Conformity

Trade Name: SONY
Model No.: DPP-FP90
Responsible Party:
Sony Electronics Inc.
Address: 16530 Via Esprillo,
San Diego, CA 92127 U.S.A.
Telephone No.: 858-942-2230

This device complies with part 15 of the FCC Rules. Operation is subject to the following two conditions:

(1) this device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

Note:

This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC Rules.

These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

– Reorient or relocate the receiving antenna.
– Increase the separation between the equipment and receiver.
– Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
– Consult the dealer or an experienced radio/TV technician for help.

For the Customer in Europe

This product has been tested and found compliant with the limits set out in the EMC Directive for using connection cables shorter than 3 meters (9.8 feet).

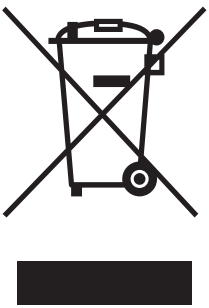
Attention

The electromagnetic fields at the specific frequencies may influence the picture of this digital photo printer.

Notice

If static electricity or electromagnetism causes data transfer to discontinue midway (fail), restart the application or disconnect and connect the communication cable (USB, etc) again.

Disposal of Old Electrical & Electronic Equipment (Applicable in the European Union and other European countries with separate collection systems)



This symbol on the product or on its packaging indicates that this product shall not be treated as household waste. Instead it shall be handed over to the applicable collection point for the recycling of electrical and electronic equipment. By ensuring this product is disposed of correctly, you will help prevent potential negative consequences for the

environment and human health, which could otherwise be caused by inappropriate waste handling of this product. The recycling of materials will help to conserve natural resources. For more detailed information about recycling of this product, please contact your local Civic Office, your household waste disposal service or the shop where you purchased the product.

NOTICE FOR CUSTOMERS IN THE UNITED KINGDOM

A moulded plug complying with BS 1363 is fitted to this equipment for your safety and convenience.

Should the fuse in the plug supplied need to be replaced, a fuse of the same rating as the supplied one and approved by ASTA or BSI to BS 1362, (i.e.marked with ASTA or BSI mark) must be used.

If the plug supplied with this equipment has a detachable fuse cover, be sure to attach the fuse cover after you change the fuse. Never use the plug without the fuse cover. If you should lose the fuse cover, please contact your nearest Sony service station.

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When using photo images with this printer, pay special attention not to infringe the provisions of the copyright law. Any unauthorized use or modification of others' portrait may also infringe their rights.

For some demonstrations, performances, or exhibits, photography may be forbidden.

Backup recommendations

To avoid potential risk of data loss caused by accidental operation or malfunction of the printer, we recommend that you save a backup copy of your data.

Information

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Sony shall assume no responsibility for any accidental or consequential damages or loss of the recording contents which may be caused by use or malfunction of the printer or memory card.

Notes on LCD screen

- The displayed image on the screen is not identical in picture quality and colors with the printed image because phosphor methods or profiles differ. Please regard the displayed image as just a reference.
- Do not press against the LCD screen. The screen may be discolored and that may cause a malfunction.
- Exposing the LCD screen to direct sunlight for long periods may cause malfunctions.
- The LCD screen is manufactured using extremely high-precision technology so over 99.99% of the pixels are operational for effective use. However, there may be some tiny black points and/or bright points (white, red, blue or green in color) that constantly appear on the LCD screen. These points are normal in the manufacturing process and do not affect the printing in any way.
- Images may trail across on the LCD screen in a cold location. This is not a malfunction.

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- This software is based in part on the work of the independent JPEG Group.
- Libtiff

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- Zlib

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On the illustrations and screen status used in this manual

The illustrations and screen status used in this manual are of the DPP-FP70 unless noted otherwise.

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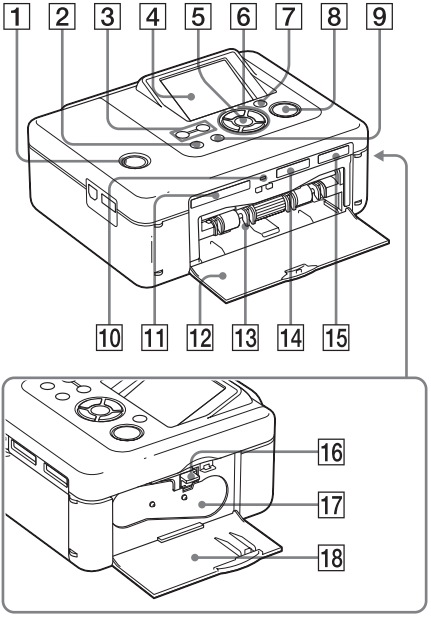
Identifying the parts

For details, see the pages indicated in the parentheses.

Illustrations are of DPP-FP70. The button locations and names of the DPP-FP90 are identical, although the LCD screen type is different.



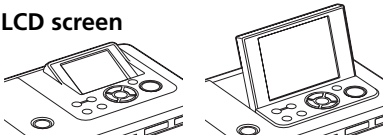
Printer front panel

1 ⏻ (on/standby) switch/indicator (➞Read This First)

2 MENU button

3 ⊖ (zoom out)/⊕ (zoom in) buttons (page 9)

4 LCD screen



2.5 type DPP-FP70 / 3.6 type DPP-FP90

5 ENTER button

6 Direction (△/▽/◁/▷) buttons

7 AUTO TOUCH-UP button (page 10)

8 PRINT button/indicator

9 CANCEL button

10 Access indicator

11 CompactFlash card slot (➞Read This First) (page 74)

12 Paper tray compartment door (➞Read This First)

13 Paper tray compartment (➞Read This First)

14 SD CARD (SD/miniSD card) slot (➞Read This First) (page 74)

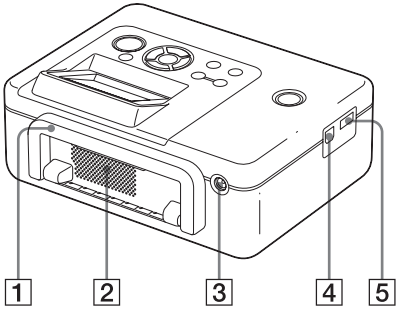
15 "Memory Stick PRO" (Standard/Duo) slot (➞Read This First) (page 72)

Printer right side panel

16 Ink ribbon eject lever (➞Read This First)

17 Ink ribbon (➞Read This First)

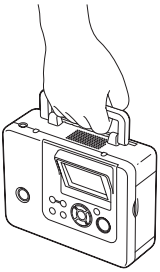
18 Ink ribbon compartment door (➞Read This First)



Printer rear panel

1 Handle

As illustrated below, raise the handle when you bring the printer.
When you use the printer, close it to its original position.



Notes

- When you bring the printer, make sure to remove memory cards, external device, and paper tray. Otherwise malfunctions may occur.
- When using the DPP-FP90, set the LCD panel to its original position.

2 Ventilation holes

3 DC IN 24V jack (→Read This First)

Connect the supplied AC power adaptor into this connector.

Printer left side panel

4 USB connector (page 41)

When using the printer in PC mode, connect a PC into this connector.

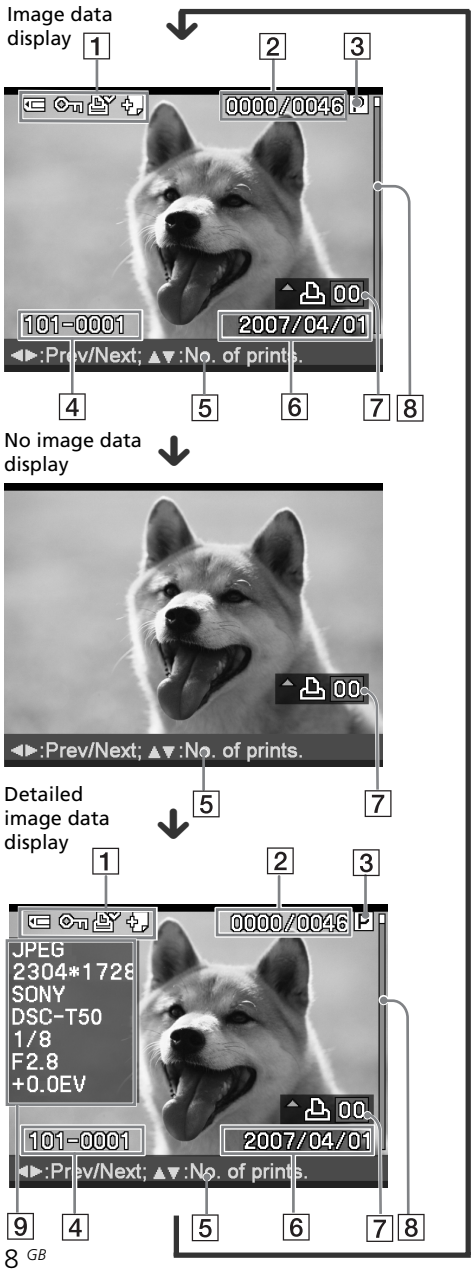
5 PictBridge/EXT INTERFACE connector (pages 35 to 38)

When using a PictBridge-compliant digital camera, a mass-storage device such as a USB memory or photo storage, Bluetooth USB adaptor (DPPA-BT1*), or other external USB device, connect it into this connector.

(*In some regions, the Bluetooth USB adaptor DPPA-BT1 is not sold.)

LCD screen display

An image preview



Each time you press ENTER, an image display mode changes. To display a different image, press ◁/▷.

1 Input/setting indications

Input indications and settings information for an image are displayed.

Icons	Meaning
	"Memory Stick" or "Memory Stick Duo" input
SD	SD/miniSD Card input
CF	CompactFlash input
USB	External Device input
	Protect indication
	DPOF preset indication
	Associated file indication (Displayed when there is an associated file such as a motion file or a miniature e-mail image file.)

2 Number of the selected images/ Total number of image

3 Ink ribbon indication

(P: P size/C: Cleaning cartridge)

4 Image number (folder- file number)*

(*DCF-compatible files only. In case of other file formats, only part of file name will be displayed.)

5 Operation tips

6 Saved date (year/month/day)

7 Print quantity

You can set the print quantity up to 20.

- To increase the print quantity one by one, press △ repeatedly.
- To reduce the print quantity one by one, press ▽ briefly repeatedly.
- To reset the print quantity to 0 immediately, press ▽ for more than two seconds.

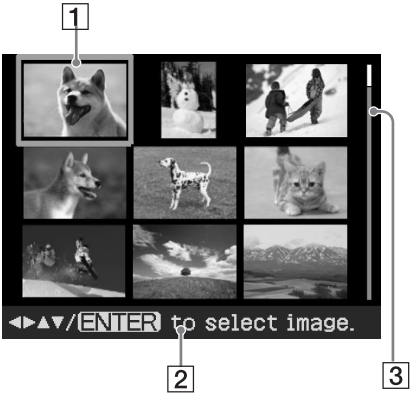
8 Scroll bar

Indicates the position of the image among the total number of images.

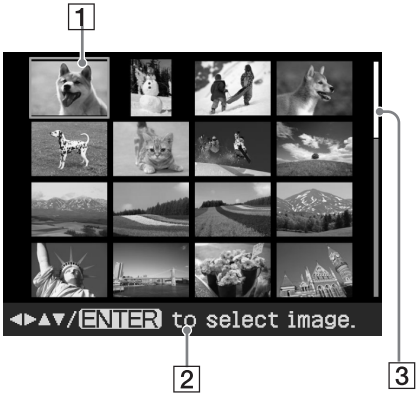
9 Detailed image data display

Image list

DPP-FP70



DPP-FP90



1 Cursor (orange frame)
You can move the cursor by pressing △/▽/◁/▷.

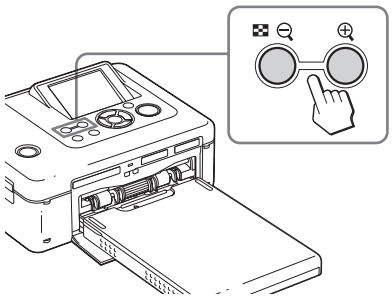
2 Operation tips

3 Scroll bar
Indicates the position of the image among the total number of images.

Switching the screen display between an image preview and image list

You can switch an image preview and the image list as follows:

- **To display the image list**
  In an image preview, press ⊖ (zoom out).
  When an image is enlarged, press ⊖ repeatedly. An image is reduced up to the original scale and then the image list is displayed.
- **To display an image preview**
  In the image list, press ◁/▷/△/▽ to move the cursor to the desired image and press ENTER or ⊕ (zoom in). The display changes from the image list to an image preview.
- **To enlarge an image preview**
  In an image preview, press ⊕ (zoom in) repeatedly. The image is enlarged to 6 steps up to the 5 times the original scale: x1, x1.5, x2, x3, x4, and x5



Correcting a failed photo automatically (AUTO TOUCH-UP)

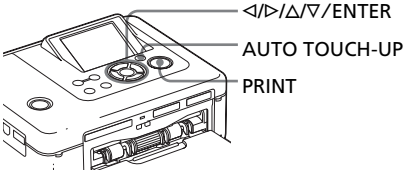
What is "AUTO TOUCH-UP" feature?

The "AUTO TOUCH-UP" feature allows you to adjust an image automatically as follows in addition to the Auto Fine Print4 automatic adjustment:

- Brightness adjustment using the face recognition
  Detects the face automatically and adjusts the brightness so that the face becomes of its optimum brightness.
- Out-of-focus reduction
  Detects the out-of-focus level automatically and corrects the image in-focus.
- Red-eye correction
  Corrects automatically red-eye phenomenon caused by flash.

Printing with the AUTO TOUCH-UP adjustments

Buttons to be used in AUTO TOUCH-UP correction print



1 Select an image or images.
Press ◁/▷ repeatedly until the desired image is displayed. When you want to print multiple images, set the print quantity for each image in advance.

2 Press AUTO TOUCH-UP.
Adjustments of the selected image(s) starts. The adjustment results will be displayed on the screen. When a human face is detected, the face is displayed with frame as adjustments process.

To check the adjustment result more clearly:
Press ⊕ to enlarge the image.

To display the original image (before adjustments) again
Press AUTO TOUCH-UP. To display the adjusted image, press AUTO TOUCH-UP again.

If you have selected multiple images when pressing AUTO TOUCH-UP
All the selected images are adjusted. To display other images, press ◁/▷.

3 Press PRINT.
Printing of the selected image(s) starts.

Tip

Adjustment takes effect only on the image being printed. The original image will not be adjusted.

Notes

- Depending on the image, face may not be automatically detected. If brightness of face is not adjusted properly, use the Edit-Adjust menu to adjust the brightness manually (page 14).
- Depending on the image, out-of-focus phenomenon may not be corrected. In this case, use the Sharpness of the Edit-Adjust menu to adjust the sharpness manually.
- Out-of-focus reduction does not take effect on blur caused by shaking of the camera.
- Depending on the image, red-eye phenomenon may not be corrected. In this case, use Red-eye correction to make red-eye adjustments manually (page 16).

The automatic red-eye correction of this printer uses the technology of FotoNation Inc. in the U.S.A.

Making easy printing (Index/DPOF/All)

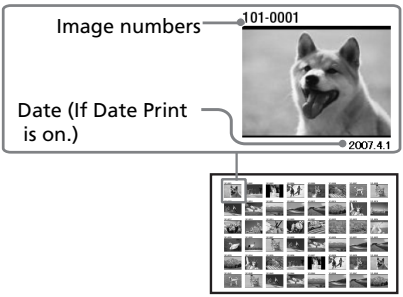
The Easy Printing menu allows you to print multiple images stored on a memory card or an external device at one time.

The printer provides the following three easy printing methods:

- **Index printing**

  You can print a list (index) of all the images contained in a memory card or an external device, which allows you to check the contents of the selected media easily.

  The number of split panes on a sheet will be calculated automatically. Images are printed with their corresponding image numbers (folder number-file number).



- **DPOF preset image printing**

  The images which are DPOF (Digital Print Order Format) preset for printing are displayed with the print mark ( ) in an image preview. You can print those images at one time. The images are printed with the preset number of copies in the order they were displayed.

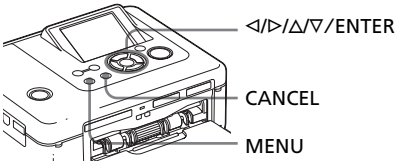
- **All images printing**

  You can print all the images stored in a memory card or an external device at one time.

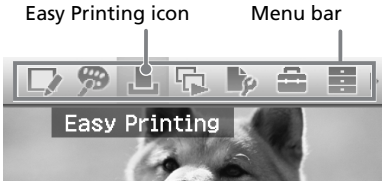
Notes

- For how to preset images for printing, see the manual of your digital camera.
- Some types of digital cameras do not support the DPOF function, or the printer may not support some of the functions of the digital camera.

Buttons to be used in easy printing



1 Press MENU on the printer.
The menu bar is displayed.



To exit the menu mode
Press MENU again. The previous window is displayed.

2 Press ◁/▷ to select (Easy Printing) and then press ENTER.
The Easy Printing menu is displayed.

Continued

3 Press △/▽ to select “Index Print”, “DPOF Print”, or “Print All” and then press ENTER.
The confirmation dialog box is displayed.

Note

If there are no DPOF preset images when you selected “DPOF Print,” an error message will be displayed.

4 Press ◁/▷ to select “Yes” to start printing or “No” to cancel printing, and then press ENTER.
When you select “Yes,” printing starts. During printing, the PRINT indicator flashes and the printing process is displayed.

To stop printing

Press CANCEL. When you are printing multiple copies, the next printing after the one currently printing will be canceled.

When printing is completed, the print paper automatically emerges on the paper tray.

5 Remove the print paper from the paper tray.

Tips

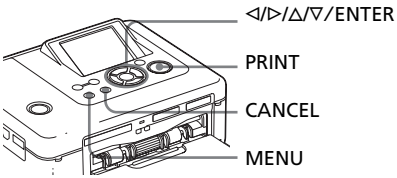
- Even if the remaining volume of the ink ribbon is shorter than the print quantity, you can proceed with printing. If the ink ribbon runs out in the middle of printing and a message appears, follow the displayed instructions to replace the ink ribbon (see “Read This First”).
- When the “Date Print” item of the Print setup menu is set to “On”, the date the image was shot or saved is printed (page 32).

Editing an image

Displaying the Edit menu

You can display the Edit menu and edit or add an effect to an image. You can print or save an image being previewed.

Buttons to be used in the Edit menu



1 Display the image that you want to edit.
Display the image in the image preview window or move the Cursor to the desired image in the image list.

2 Press MENU on the printer.
The menu bar is displayed.

To exit the menu mode

Press MENU again. The previous window is displayed.

3 Press ◁/▷ to select (Edit) and then press ENTER.
The Edit menu is displayed.

Items	Procedures
⊖/⊕	Increases or reduces the size of an image by pressing the buttons on the printer.
	Moves an image.
	Rotates an image.
	Adjusts the picture quality of an image.
	Adds an filter to an image.
	Reduces the red-eye phenomenon.
	Undoes the editing just done and resets the image to the status before editing.
	Saves the edited image.
	Exits the Edit menu.

Tip

You can set part of the Print setup menu items from MENU while editing an image.

Enlarging and reducing an image size

1 Display the Edit menu (page 12).

2 Press ⊕ (zoom in) to enlarge an image or ⊖ (zoom out) to reduce the size of it.
Each time you press the button, the image becomes larger or smaller:

⊕: up to 200%

⊖: up to 60%

Note

The picture quality of an enlarged image may be deteriorated depending on its size.

Moving an image

1 Display the Edit menu (page 12).

2 Press ◁/▷ to select (Move) and then press ENTER.
The ◁/▷/△/▽ appears on the left/right/above/down the image and you can move the image.

3 Move the image with ◁/▷/△/▽.
The image moves to the selected direction.

4 Press ENTER.
The image is fixed to the position.

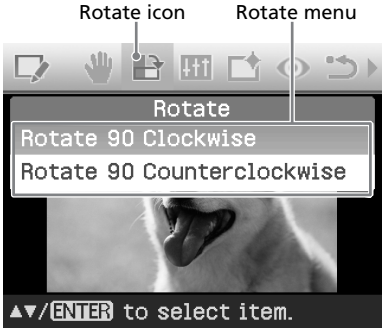
Tip

To print the image previewed, press PRINT (page 17).

Rotating an image

1 Display the Edit menu (page 12).

2 Press ◁/▷ to select (Rotate) and then press ENTER.
The Rotate menu is displayed.



3 Press △/▽ to select the direction to rotate the image and then press ENTER.

- Rotate 90 Clockwise: Each time you press ENTER, the image rotates 90° clockwise.
- Rotate 90 Counterclockwise: Each time you press ENTER, the image rotates 90° counterclockwise.

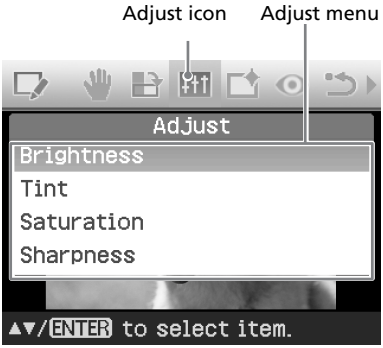
Tip

To print the image previewed, press PRINT (page 17).

Adjusting an image

1 Display the Edit menu (page 12).

2 Press ◁/▷ to select (Adjust) and then press ENTER.
The Adjust menu is displayed.



3 Press △/▽ to select the desired adjustment tool and press ENTER.
The adjustment slider appears.

When "Brightness" is selected.

4 Move the slider to the desired position to adjust the level.

- **Brightness**: Press ▷ to brighten the picture or ◁ to darken it.
- **Tint**: Press ▷ to make the picture bluish or ◁ to make it reddish.
- **Saturation**: Press ▷ to deepen the colors or ◁ to lighten the colors.
- **Sharpness**: Press ▷ to sharpen the outlines or ◁ to soften them.

5 Press ENTER.
The adjustment takes effect. The Edit menu appears again.

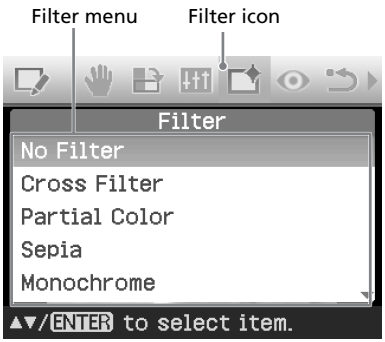
Tip

To print the image previewed, press PRINT (page 17).

Adding a special filter to an image

1 Display the Edit menu (page 12).

2 Press ◁/▷ to select (Filter) and then press ENTER.
The Filter menu is displayed.



3 Press △/▽ to select the desired filter you want to add to the image.

- **No Filter:** No special filter on the image (default setting).
- **Cross Filter:** Adds a cross, starburst effect to the light source to print an image with sparkling impression.
- **Partial Color:** Makes the surroundings of the subject in monochrome to emphasize the subject in the center.
- **Sepia:** Changes the image like an old photograph with faded colors.
- **Monochrome:** Changes the image into a black and white picture.
- **Paint:** Makes the image look like a painted picture.
- **Fish-eye:** Makes the image look like a photo taken with a fish-eye lens.

4 Press ENTER.
The filter takes effect.
When you have selected "Cross Filter", the setting window is displayed.

5 Set the level and range for Cross Filter.

①Select "Level" with △/▽ and press ENTER, adjust level of retouch with △/▽, then press ENTER.
The higher the level you set, the more light sources become sparkling.

②Select "Length" with △/▽ and press ENTER, adjust length of light with △/▽, then press ENTER.

③ Press △/▽ to select OK. Then press ENTER.

Tip

To print the image previewed, press PRINT (page 17).

Correcting the red-eye phenomenon

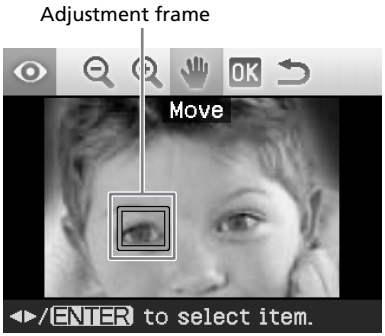
When pressing AUTO TOUCH-UP cannot reduce the red-eye phenomenon of a subject shot by flash, you can adjust it manually.

Note

If you perform additional editing, such as enlarging, reducing the image size, rotating or moving an image, after the red-eye correction, the red-eye correction may not take effect. Perform the red-eye correction after these editorial operations.

1 Display the Edit menu (page 12).

2 Press ◁/▷ to select (Red-eye correction) and then press ENTER.
The adjustment frame appears on the image, which indicates the range for red-eye correction.



3 Adjust the position and size of the adjustment frame.
Make the red-eye correction for the right and left eyes separately.

To move the adjustment frame

① Press ◁/▷ to select (Move) and press ENTER.
② Move the frame with ◁/▷/△/▽.
The frame moves in the selected direction.
③ Press ENTER.
The frame is fixed in the current position.

To change the size of the adjustment frame

Press ◁/▷ to select (Enlarge) or (Reduce) and press ENTER.
Each time you press ENTER, the frame becomes larger or smaller.
You can also enlarge or reduce the size by pressing ⊕ (zoom in) or ⊖ (zoom out) buttons on the printer.

Tip

Make the size of the adjustment frame two to seven times as large as the eye size.

4 Press ◁/▷ to select OK and press ENTER.
The range of red-eye correction is enlarged.

5 Press ENTER.
The adjustment takes effect.
The Red-eye correction menu is displayed.
To make a red-eye correction for other eyes, repeat steps 3 to 5.

6 Press ◁/▷ to select and press ENTER.
The Edit menu is displayed again.

To reset the adjustment

Press CANCEL in step 5 instead of ENTER. The red-eye correction is canceled and the window of step 2 is displayed.

Tip

To print the image previewed, press PRINT (page 17).

Printing an edited image

1 Press PRINT.
The dialog box to specify the print quantity is displayed.

2 Press △/▽ to increase or decrease the print quantity.

- To increase the print quantity one by one, press △ repeatedly.
- To reduce the print quantity one by one, press ▽ briefly repeatedly.
- To reset the print quantity to 1, press ▽ for more than two seconds.

3 Press PRINT to start printing.
The image previewed is printed.

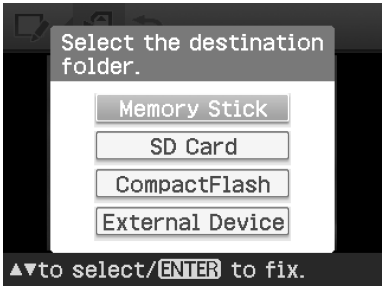
Saving an edited image

When you select (Save) in the Edit or Creative Print menu, the dialog box to select the destination to save the image is displayed. You can save the image under a new image number.

Tip

The selected image will not be overwritten.

1 Select the destination to save an image.
Press △/▽ to select "Memory Stick", "SD Card", "CompactFlash", or "External Device", and press ENTER.

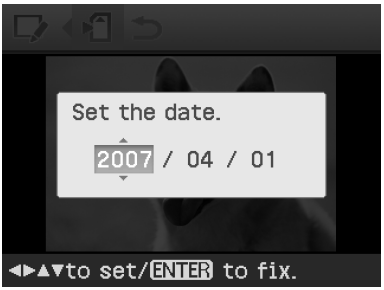


Tip

When you select "External Device", a dialog box for selecting a drive may be displayed. Follow the instructions on the screen to select the destination drive.

The dialog box for setting date is displayed. You can save the set date with the image.

2 Set date.
Press △/▽ to select the number and press ◁/▷ to select the day, month or year. Then press ENTER.



The edited image by the Edit or Creative Print menu is saved as a new image. The dialog box to notify the new image number (folder number-file number) is displayed.

3 Press ENTER.

Note

While saving the image, do not turn off the printer or remove a memory card or an external device from the printer. The printer, memory card, USB card, or external device may be damaged or the data may be lost.

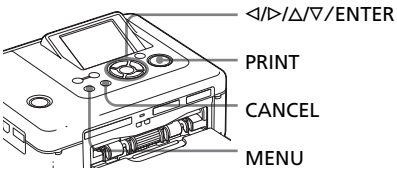
Making a Creative Print

With images saved in a memory card or an external device, you can make the following prints:

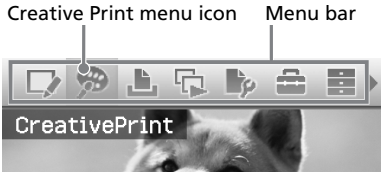
Menu	You can make...
Layout Print	A print with 2/4/9/13/16 split images.
Calendar	Calendars with your favorite images.
ID Photo	An ID photo by specifying vertical and horizontal sizes for an image.
Superimpose	A print with superimposed message, handwrite characters or illustrations.

Displaying the Creative Print menu

Buttons to be used in Creative Print



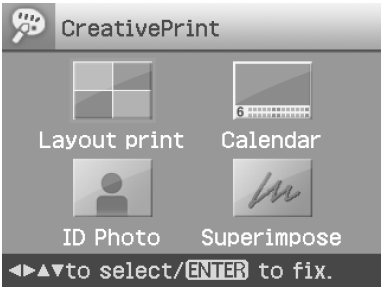
1 Press MENU.
The menu bar is displayed.



To exit the menu mode

Press MENU again. The previous window is displayed.

2 Press ◁/▷ to select (Creative Print) and then press ENTER.
The Creative Print menu is displayed.



To undo the operation midway

Press CANCEL. The window of the previous step is displayed. Depending on the step, you cannot undo the operation.

Tip

You can press MENU while making a Creative Print and set part of the Print setup menu items.

To exit the Creative Print menu

- Press MENU in the middle of the operations and select "Creative Print Complete".
- Display the preview image and then press ◁/▷/△/▽ to select and press ENTER.

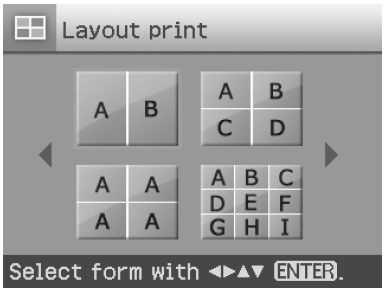
The dialog box for saving an image may be displayed (page 17).

Making layout prints

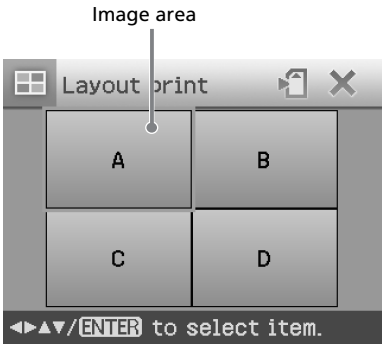
You can make a print with 2-split, 4-split, 9-split, 13-split, or 16-split images.

1 Display the Creative Print menu (page 18).

2 Press ◁/▷/△/▽ to select "Layout Print", then press ENTER.
The Layout Print templates are displayed.



3 Press ◁/▷/△/▽ to select the desired template, then press ENTER.
The preview of the selected template is displayed.

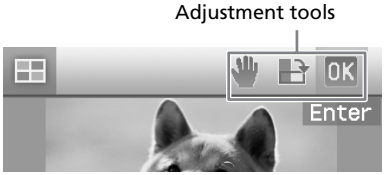


Tip

You can select and set each area in any order.

4 Press ◁/▷/△/▽ to select the desired image area and press ENTER.
The window for selecting an image is displayed.

5 Press ◁/▷/△/▽ to select the desired image, and then press ENTER.
The window used for adjusting the image position is displayed.



6 Adjust the size and position of the selected image.
Press ◁/▷ to select the desired adjustment item, then press ENTER.

Items	Procedures
⊖/⊕	Increases or reduces the size of an image by pressing the buttons on the printer.
	Move the image with ◁/▷/△/▽, and then press ENTER.
	Each time you press ENTER, the image rotates 90° clockwise.
AUTO TOUCH-UP	Automatically adjusts a failed photo having problems such as backlit, out-of-focus, or red-eye phenomenon, by pressing the button on the printer.

Continued

7 Press ◁/▷ to select OK and press ENTER.
The selected image is added to the image area. When you select a template with multiple images, repeat the steps 4 through 7 to select an image for each area.

Tip

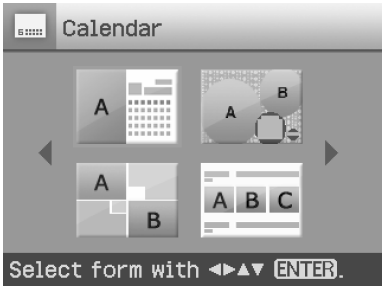
To save or print the layout images previewed, see page 17.

Making a calendar

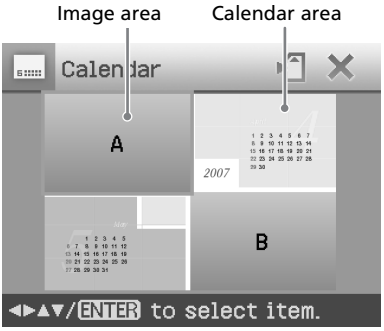
You can make calendars with your favorite images.

1 Display the Creative Print menu (page 18).

2 Press ◁/▷/△/▽ to select "Calendar", then press ENTER.
The window used for selecting the calendar template, is displayed.



3 Press ◁/▷/△/▽ to select the desired template, and then press ENTER.
The preview of the selected template is displayed.



Tip

You can select and set an image area or calendar area in any order.

4 Select an image.
When you select a template with multiple images, repeat the procedures below to select an image for each area.

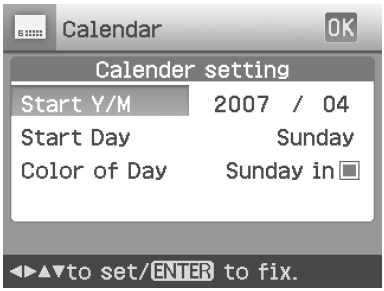
① Press ◁/▷/△/▽ to select an image area, then press ENTER.
The image list is displayed.

② Press ◁/▷/△/▽ to select the desired image, then press ENTER.
The window used for adjusting the image angle and position is displayed. For information on adjustment, see step 6 on page 19.

③ Press ◁/▷ to select OK and then press ENTER.
The image is selected and displayed in the relevant area.

5 Set the calendar.

① Press ◁/▷/△/▽ to select the calendar area and press ENTER to display the calendar setting window.



② Press △/▽ to select the following items and then press ◁/▷ to select an option.

Item	Procedures
Start Y/M	Set the first month and the year starting the calendar. Press ◁/▷ to select the month or year and press △/▽ to set the number. Press ENTER.
Start Day	Set the day of the week (placed furthest left in the calendar). Press △/▽ to select "Sunday" or "Monday". Then press ENTER.
Color of Day	Set the color of Sunday and Saturday to be displayed in the calendar. Press ▷ and then △/▽ to select the desired color for Sunday and Saturday. Then press ENTER.

③ Press ◁/▷/△/▽ to select OK and then press ENTER.

The calendar is displayed in the calendar area.

Tip

To save or print the calendar previewed, see page 17.

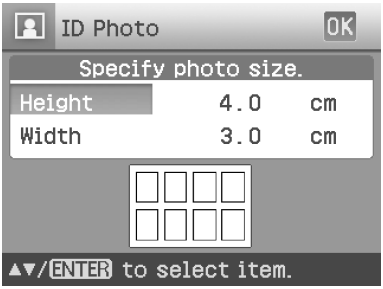
Making an ID photo

You can specify the desired vertical and horizontal sizes for an image to be printed as an photo for an identification card such as a passport or a small photo stand.

1 Display the Creative Print menu (page 18).

2 Press ◁/▷/△/▽ to select "ID Photo", then press ENTER.

The window used for setting the height and width of an ID photo is displayed.



Tip

You can set both height and width a value between 2.0 to 6.0 cm.

3 Press △/▽ to select height or width that you want to adjust and press ENTER.

The cursor moves to the number input area.

4 Press △/▽ to set the size and then press ENTER.

The ID photo preview of the specified size is displayed.

5 If you want to specify the other size, repeat steps 3 and 4.

Continued

6 Press △/▽ to select OK and press ENTER.
The window for selecting an image is displayed.

7 Press ◁/▷/△/▽ to select the desired image, and then press ENTER.
The window used for adjusting the image position is displayed.

8 Adjust the size and position of the selected image.
Press ◁/▷ to select the desired adjustment item, then press ENTER.

Items	Procedures
⊖/⊕	Increases or reduces the size of an image by pressing the buttons on the printer.
	Move the image with ◁/▷/△/▽, and then press ENTER.
	Each time you press ENTER, the image rotates 90° clockwise.
	Press △/▽ to select the desired adjustment item and press ENTER. Adjustment slider is displayed. Press ◁/▷ to move the slider to the desired position to adjust the brightness, tint, saturation, or sharpness level.
	Changes the image into a monochrome picture.
	Corrects the red-eye phenomenon. (Page 16)
AUTO TOUCH-UP	Automatically adjusts a failed photo having problems such as backlit, out-of-focus, or red-eye phenomenon, by pressing the button on the printer.

9 Press ◁/▷ to select OK and press ENTER.
The preview of the ID photo print is displayed.

Tip

To save and print the ID photo previewed, see page 17.

Note

An ID photo print may not be able to be used for an identification card or passport. Please check the requirements for the photo to be used in the certificate before you submit the card or passport.

Superimposing a message on an image

You can place a preset message, handwritten characters or illustrations on an image (superimposing).

Tip

To superimpose a handwritten characters or illustration, draw them with a black ink pen on a white paper, shoot them with a digital camera, and save them on a memory card. You can also use "Superimpose characters glossary" on page 79.

1 Display the Creative Print menu (page 18).

2 Press ◁/▷/△/▽ to select "Superimpose", then press ENTER.
The window used for selecting the background image is displayed.

3 Select an image for background.
① Press ◁/▷/△/▽ to select an image for background, then press ENTER.
The window used for adjusting the image angle and position is displayed. For information on adjustment, see step 6 on page 19.
③ Press ◁/▷ to select OK and then press ENTER.
Preview window is displayed.

4 Superimpose a handwritten or standard format message over the background image.

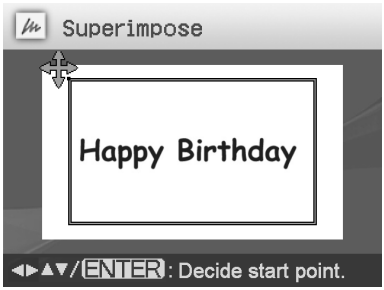
■ **To superimpose a handwritten message**

①Press ◁/▷ to select (Handwritten message), then press ENTER.

The window for selecting an image to be superimposed is displayed.

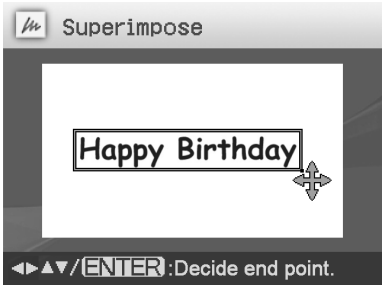
②Press ◁/▷/△/▽ to select an image you want to superimpose and press ENTER.
Select the image of handwritten characters or illustrations you have prepared in advance.
The trimming cursor is displayed.

③Press ◁/▷/△/▽ to specify the beginning point of the area to be superimposed, then press ENTER.



④Press ◁/▷/△/▽ to specify the ending point of the area, then press ENTER.

Continued



The color selection window is displayed.

To return to the previous step

Press CANCEL.

⑤Press ◁/▷/△/▽ to select the desired color and then press ENTER.

The window used for adjusting the superimposed image angle and position is displayed.

For information on adjustments, see step 6 on page 19.

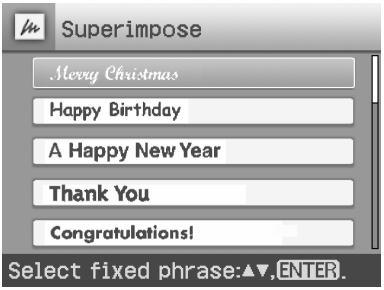
⑥Press ◁/▷ to select OK and press ENTER.

The preview of the selected image superimposed on the background image is displayed.

■ Superimposing a standard format message

①Press ◁/▷ to select T (Standard format message), then press ENTER.

The window for selecting preset message is displayed.



②Press △/▽ to select the desired message and press ENTER.

The color selection window is displayed.

③Press ◁/▷/△/▽ to select the desired color and then press ENTER.

The window used for adjusting the message angle and position is displayed. For information on adjustments, see step 6 on page 19.

④Press ◁/▷ to select OK and press ENTER.

The preview of the superimposed message on the background image is displayed.

To superimpose multiple handwritten characters or preset messages

Press ◁/▷ to select (Handwritten message) or T (Standard format message) and repeat step 4.

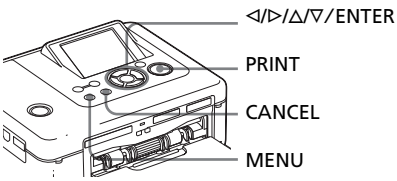
Tip

To save and print the superimposed image previewed, see page 17.

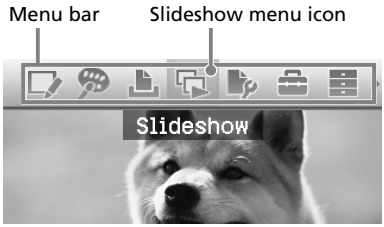
Viewing a slideshow

You can perform a slideshow of the images saved in a memory card or an external device. You can also manually print an image being displayed.

Buttons to be used in this section



1 Press MENU.
The menu bar is displayed.



To exit the menu mode
Press MENU again. The previous window is displayed.

2 Press ◁/▷ to select (Slideshow) and then press ENTER.
The Slideshow menu is displayed.

3 Press △/▽ to select "Switch", and then press ENTER.
The window to specify the way how images are switched is displayed.

4 Press △/▽ to select "Automatic" to switch images automatically or "Manual" to switch them manually. Then press ENTER.

5 Press △/▽ to select "Execute", and press ENTER.

- When "Automatic" is selected: The images in the memory card or an external device are displayed automatically one after another.
- When "Manual" is selected:
  The image with the cursor in the image list is displayed. To switch images, press ◁/▷.

To stop slideshow
Press CANCEL.

Tip

While playing the slideshow manually, you can print a displayed image by pressing PRINT.

Notes

- Depending on the image, it may take time to be displayed.
- You cannot display the images that are not displayed as thumbnails because they are damaged or for some other reason.

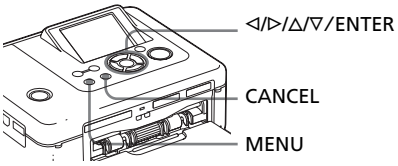
Searching for an image

The Search menu allows you to search a memory card or an external device for an image by image number or date.

Note

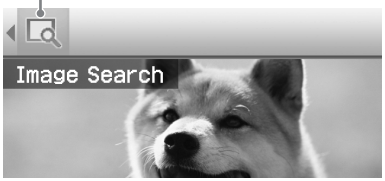
You can search for the images saved as DCF files only.

Buttons to be used in this section



1 Press MENU.
The menu bar is displayed.

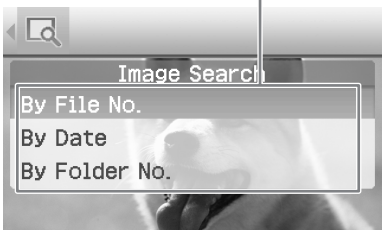
Image Search menu icon



To exit the menu mode
Press MENU again. The previous window is displayed.

2 Press ◁/▷ to select (Image Search) and then press ENTER.
The Image Search menu is displayed.

Image Search menu

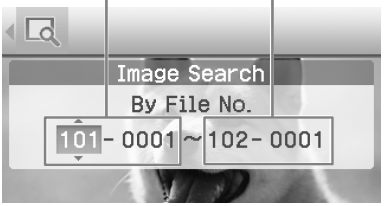


3 Press △/▽ to select the search key and press ENTER.
The dialog box used for specifying the criteria for searching is displayed.

4 Press ◁/▷ to select an item and press △/▽ to specify numbers.

- **When you select "By File No.":**
  Specify the starting and ending numbers of the files (folder and file numbers) that you want to search for:

Starting image number Ending image number



Tip

The above screen is when a Sony Cyber-shot digital camera is connected.

- **When you select "By Date":**
  Specify the starting and ending dates of the files that you want to search for:

Starting date Ending date

Tip

To search for images of a specific day, enter the same date in both the boxes.

- **When you select "By Folder No.":**
  Specify the folder number of the images you want to search for:

5 Press ENTER.
Searching starts. When the search is complete, the search results will be displayed.

If no images have been found
"No images were found" will be displayed.

6 Press ENTER.
The searched image is displayed.
The searched results are displayed as the status before you entered the menu. When you searched from the image list, "01" will be displayed with the relevant images in the image list.

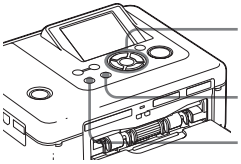
- If you selected "By File No." and "By Date", "01" is displayed on the images found to indicate their print quantity. You can easily check the images you selected on the image list.
- If you selected "By Folder No.", the first or last image in the selected folder is displayed.

Tip

To print a searched image, press ◁/▷/△/▽ to select the desired image and then press ENTER to display it in the image preview. Press △/▽ to set the print quantity and then press PRINT to start printing.

Filing images

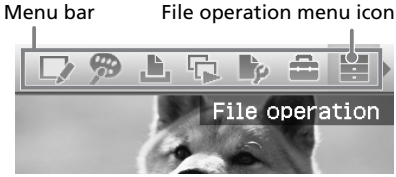
Buttons to be used in this section



Copying images

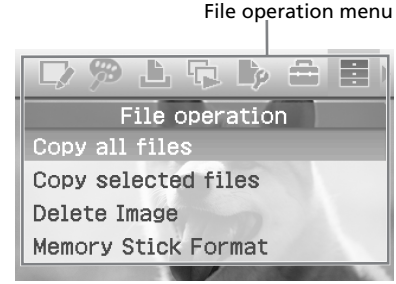
You can copy images between memory cards inserted in the memory card slot or an external device connected to the PictBridge/EXT INTERFACE connector.

1 Press MENU.
The menu bar is displayed.



To exit the menu mode
Press MENU again. The previous window is displayed.

2 Press ◁/▷ to select (File operation) and then press ENTER.
The File operation menu is displayed.



Continued

3 Press △/▽ to select "Copy all files" or "Copy selected files" and press ENTER.

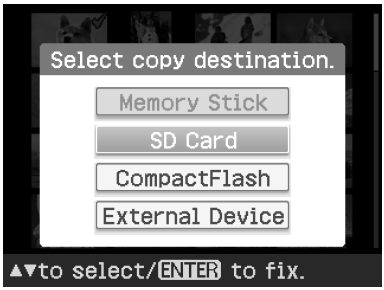
- When "Copy all files" is selected, the dialog box to select the destination to copy the image(s) is displayed. Skip to step 6.
- When "Copy selected files" is selected, the image list of the memory card or external device is displayed.

4 Press ◁/▷/△/▽ to select the desired image and press ENTER.
To copy multiple images, repeat this step.

To cancel the selection
Press ◁/▷/△/▽ to select the image whose selection you want to cancel, and press ENTER again.

5 Press MENU.
The dialog box to select the destination is displayed.

6 Press △/▽ to select "Memory Stick", "SD Card", "CompactFlash", or "External Device", and press ENTER.



Tip

When you select "External Device", a dialog box for selecting a drive may be displayed. Follow the instructions on the screen to select the destination drive.

Note

You cannot copy an image onto the identical memory card or external device as those containing the image to be copied.

The dialog box for selecting a folder is displayed.

7 Press △/▽ to select the desired folder and press ENTER.
The selected images are copied onto the destination folder.

Tip

To exit the File operation menu midway, press CANCEL.

Note

While copying images, do not turn off the printer or remove a memory card or an external device from the printer. The printer, memory card, or USB external device may be damaged or the data may be lost.

Deleting selected images

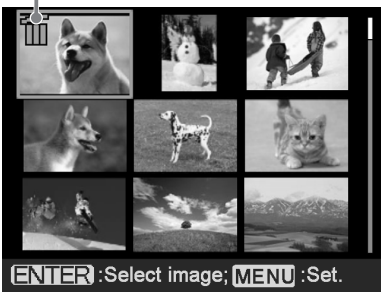
You can select and delete images on a memory card.

1 Press MENU.
The menu bar is displayed.

2 Press ◁/▷ to select (File operation) and then press ENTER.
The File operation menu is displayed.

3 Press △/▽ to select "Delete Image" and press ENTER.
The image list is displayed.

Trash icon



4 Press ◁/▷/△/▽ to move the trash icon to the image you want to delete, then press ENTER.
To delete multiple images, repeat this step.

To cancel the selection
Press ◁/▷/△/▽ to select the image whose selection you want to cancel, and press ENTER again.

5 Press MENU.
A confirmation dialog box is displayed.

6 Press ◁/▷ to select "OK" and press ENTER.
The selected images are deleted.

Tip

To exit the File operation menu, press CANCEL.

Notes

- During deleting, do not turn off the printer or remove the memory card. The printer or the memory card may be damaged. Or the data may be lost.
- An image, once deleted, will be lost forever. Before deleting an image, double-check that it is the right one.
- When you delete an image with the associated file indication ( ), the associated motion or e-mail file will be also deleted.
- You cannot delete a protected image with the protect indication ( ) or a DPOF preset indication ( ) displayed. To delete them, use your digital camera. For the details, see the operating instruction of the digital camera.

Formatting a "Memory Stick"

You can format a "Memory Stick".

1 Press MENU.
The menu bar is displayed.

2 Press ◁/▷ to select (File operation) and then press ENTER.
The File operation menu is displayed.

3 Press △/▽ to select "Memory Stick Format" and press ENTER.
The confirmation dialog box is displayed.

4 Press ◁/▷ to select "OK" and press ENTER.
The "Memory Stick" is formatted.

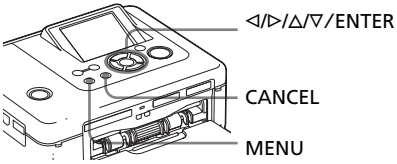
Notes

- When you format a "Memory Stick", all the images inside are deleted.
- During formatting, do not turn off the printer or remove the memory card. The printer or the memory card may be damaged. Or the image may be lost.
- You cannot format a memory card other than the "Memory Stick" or an external device.

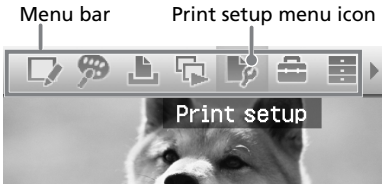
Changing the print settings (Print setup)

The Print setup menu allows you to change various print settings listed on pages 31 and 32.

Buttons to be used in this section

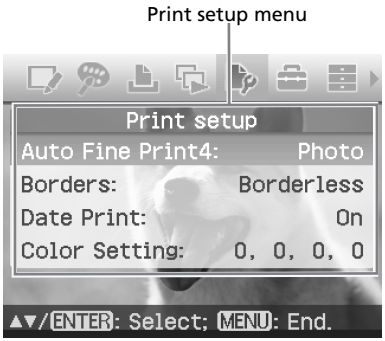


1 Press MENU.
The menu bar is displayed.



To exit the menu mode
Press MENU again. The previous window is displayed.

2 Press ◁/▷ to select (Print setup) and then press ENTER.
The Print setup menu is displayed.



Note

During the Creative Print operations, you cannot select the items except for "Color Setting". (Setting items which cannot be selected and changed are displayed in gray.)

3 Press △/▽ to select the desired setting item, and press ENTER.
The setting window for the selected item is displayed (next page).

4 Press △/▽ to select the desired setting and press ENTER.
The setting is fixed.

Tip

To exit the Print setup menu, press MENU.

Item	Settings	Contents
Auto Fine Print4	Photo*/ Vivid	The function automatically corrects the picture quality so that an image may be printed in more vivid, clear and beautiful pictures. It is especially effective for a darker image with low contrast. The pictures are corrected to reproduce natural skin colors, vivid tree leaf green, or clear sky blue. • Photo: Adjusts an image automatically so that the image is printed with natural and beautiful pictures. (Recommended) • Vivid: Adjusts an image automatically so that the image is printed with stronger sharpness correction and more vivid pictures than the Photo mode. **Tip** For the images shot by an Exif Print (Exif 2.21)-compliant digital camera, they are adjusted to their optimum picture quality. **Notes** • The image data is not corrected. • When printing in PC mode, the Auto Fine Print 4 setting with the printer driver has priority over the setting here. In the PictBridge mode, this setting holds effective.
	Off	Prints an image without any corrections.
Borders	Pattern1/2	Prints an image with borders around the image. To leave almost-equal borders in the top, bottom, right and left around an image, select "Pattern2". To pint an image without being cut, select "Pattern1". **Note** When you select "Pattern 2", the top and bottom edges or right and left edges may be trimmed and printed depending on the image.
	Borderless*	Prints an image without blank space around the image. **Note** When printing a standard 4:3 picture shot by a digital camera, the top and bottom edges of the image are cut and it is printed as a 3:2 picture. Pattern1 Pattern 2 Borderless

*: Factory settings

Continued

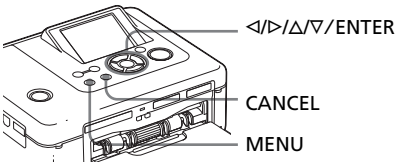
Item	Settings	Contents
Date Print	On	Prints the date of shooting with an image when the image is a file recorded in the DCF (Design rule for Camera File system) format. To make a print with the date of shooting, shoot an image in the DCF file format. When the image is saved with the printer, the date of saving is printed.
	Off*	Prints an image without the date.
Color Setting		Adjusts the colors and sharpness of a print. Press ◁/▷ to select a color element ("R" (red), "G" (green), or "B" (blue)) or "S" (Sharpness), and then press △/▽ to set the level. You can set the levels for R, G, B in the range from +4 to –4 and for S in the range from +7 to 0. **R:** Adjusts the red and blue elements. The higher you set the level, the more reddish the picture becomes as if it receives red light. The lower you set the level, the darker the picture becomes as if light blue is added. **G:** Adjusts the green and purple elements. The higher you set the level, the more greenish the picture becomes as if it receives green light. The lower you set the level, the darker the picture becomes as if red purple is added. **B:** Adjusts the blue and yellow elements. The higher you set the level, the more bluish the picture becomes as if it receives blue light. The lower you set the level, the darker the picture becomes as if yellow is added. **S:** The higher you set the level, the more distinct the outlines become. (*R: 0/G:0/B:0/S:0)

*: Factory settings

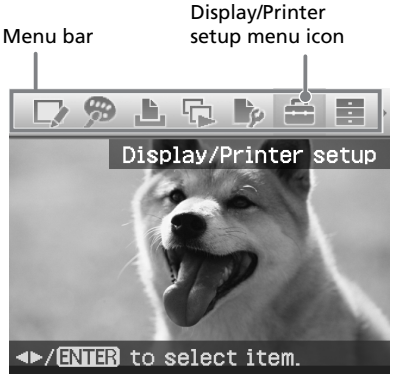
Changing the display and printer preferences (Display/Printer setup)

The Display/Printer setup menu allows you to change the display and printer preferences listed on page 34.

Buttons to be used in this section

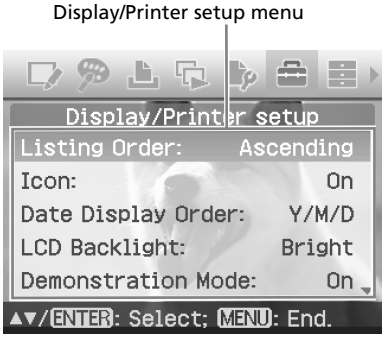


1 Press MENU.
The menu bar is displayed.



To exit the menu mode
Press MENU again. The previous window is displayed.

2 Press ◁/▷ to select (Display/Printer setup) and then press ENTER.
The Display/Printer setup menu is displayed.



3 Press △/▽ to select the desired setting item, and press ENTER.
The setting window for the selected item is displayed (next page).
To display the hidden setting items, scroll the window with △/▽.

Note

During Edit or Creative Print operations, some items cannot be selected and changed. Those items which cannot be changed are displayed in gray.

4 Press △/▽ to select the desired setting and press ENTER.
The setting is fixed.

Tip

To exit the Display/Printer setup menu, press MENU.

Continued

Item	Settings	Contents
Listing Order	Ascending*	In the image list window, the images are displayed in the order of their image numbers, starting from the smallest number.
	Descending	In the image list window, the images are displayed in the order of their image numbers, starting from the largest number.
Icon	On	In the image list window, the images without thumbnail (miniature image used as index) data will be displayed as an icon.
	Off*	In the image list window, the images without thumbnail (miniature image used as index) data will be displayed as its original image.
Date Display Order	Set the displayed order of the date (Year, Month, and Day) from the following: •Y/M/D* • M/D/Y •D/M/Y	
LCD Backlight	Set the brightness level of the LCD backlight from the following: Bright*/Dark	
Demonstration Mode	On*	A flash file demonstration to explain the functions of the printer starts automatically after the printer has been left unused for about 5 seconds without any memory card or external device connected. To stop the demonstration, press any button.
	Off	No demonstration flash file will be started.
Unit	In the Creative Print ID photo menu, you can select the unit you use in specifying the sizes of a photo as follows: • cm* • inch	
Printer Information Display	Version of the firmware and total print number will be displayed.	
Language	You can select the language to display menu or messages: Japanese/ English*/French/Spanish/German/Italian/Russian/Korean/ Chinese (Simplified)/Chinese (Traditional)/Netherlands/ Portuguese/Arabian/Persian	

*: Factory settings

Printing from the PictBridge digital camera

You can connect a PictBridge-compliant digital camera and print an image directly from your digital camera.

When printing from a PictBridge/EXT INTERFACE connector, make sure to remove memory card(s) from the printer in advance.

1 Set your digital camera ready for printing with a PictBridge-compliant printer.

The settings and operations that are necessary before connection differ depending on the digital camera. For details, see the operating instructions of the digital camera you use. (In case of Sony Cyber-shot digital camera, for example, select "PictBridge" mode for the "USB Connect".)

2 Connect the printer to the AC power source (→ Read This First).

3 Press ⏻ (on/standby) switch to turn on the printer.

The ⏻ (on/standby) indicator of the printer lights in yellow green.

4 Connect a PictBridge-compliant digital camera to the PictBridge/EXT INTERFACE connector of the printer.

When you connect a PictBridge-compliant digital camera to the printer, "Connecting" is displayed on the LCD display of the printer.

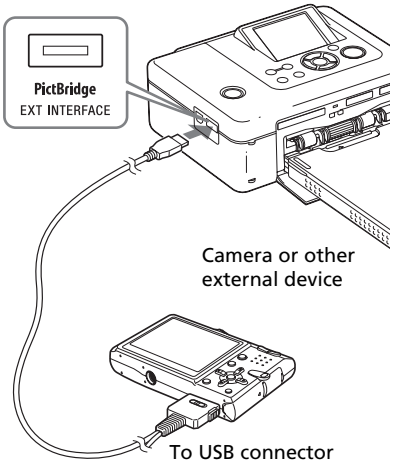
5 Operate the digital camera to print an image.

The printer supports the following prints:

- Single-image print
- All images print
- Index print
- DPOF print
- Border/Borderless print
- Date print

For notes during printing, please read "Read This First".

To PictBridge/EXT INTERFACE connector



Notes

- If you replace an ink ribbon while the printer is connected to a PictBridge-compliant digital camera, an image may not be printed properly. If this occurs, disconnect and then connect the digital camera.
- When printing from a PictBridge-compliant digital camera, an image will be printed according to the settings of the Print setup menu of the printer. When you set the date print or border/borderless options with your digital camera, the digital camera settings will have priority. If you select "Borderless" with the printer and "Border" with your camera, the "Pattern1" will be used for printing.
- For error messages displayed on your digital camera, refer to the operating instructions of your digital camera.
- You cannot use a USB hub or a digital camera containing USB hub.

Printing from a Bluetooth-compliant device

By connecting the Sony DPPA-BT1 Bluetooth USB adaptor to your printer, you can print an image of a Bluetooth-compliant mobile phone, digital camera, or other device.

Notes

- Do not use the DPPA-BT1 outside the area you purchased it. Depending on the areas, the use of the adaptor may infringe the wave regulations and may be subject to its penalty.
- In some regions, the Sony DPPA-BT1 Bluetooth USB adaptor is not sold.

Compatible profiles for Bluetooth communication

The DPPA-BT1 adaptor supports the following profiles:

- BIP (Basic Imaging Profile)
- OPP (Object Push Profile)

For the profiles that your Bluetooth device supports, please refer to its manual.

What is "Profile"?

Standards that enable the Bluetooth wireless communication. There are several profiles depending on the purposes and product profiles to be used. To make the Bluetooth communication possible, the devices to be communicated should support the same profile.

Compatible image file formats to be printed

JPEG: DCF 2.0 compatible, Exif 2.21 compatible, JFIF (4:4:4, 4:2:2, 4:2:0 formats Baseline JPEG)

TIFF: Exif 2.21 compatible

BMP: 1, 4, 8, 16, 24, 32 bit Windows format

Some image file formats are not compatible.

Maximum number of pixels to be handled

8 000(H) x 6 000(V) dots (Maximum 5 MB or less)

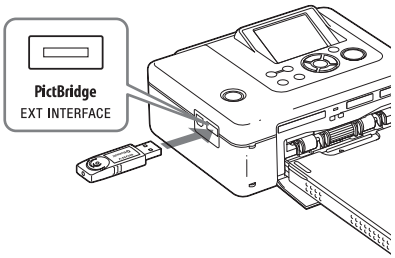
Printing procedures

When printing from a PictBridge/EXT INTERFACE connector, make sure to remove memory card(s) from the printer in advance.

1 Connect the printer to the AC power source.

2 Press the ⏻ (on-standby) switch to turn on the printer.

3 Insert the Bluetooth adaptor to the PictBridge/EXT INTERFACE connector of your printer.

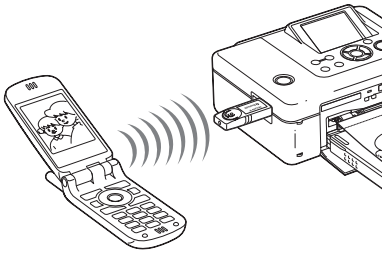


Note

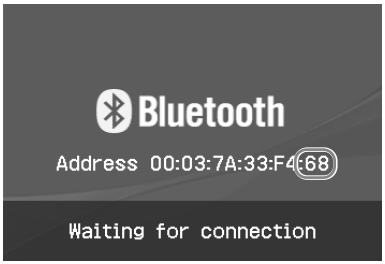
In case any device, other than the Bluetooth adaptor, such as a memory card, camera, PC, or other external device or a USB cable is connected to any of the memory card slots, the PictBridge/EXT INTERFACE connector, or USB connecter of your printer, remove it from the printer and then connect the Bluetooth adaptor.

4 Print from the Bluetooth-complaint mobile phone, or other device.

For printing procedures, refer to the manual of the Bluetooth device you use.



To select the printer from a Bluetooth-compliant device, select "Sony DPP-FP70 ##"/"Sony DPP-FP90 ##". ("##" stands for the two figures from the right of the address displayed in the LCD screen.):



When input of Pass code* is required

Input "0000". You cannot change the pass cord with the printer.

* Pass code is often referred to as "pass key" or "PIN code".

Notes

- The communication distance of the product may vary depending on the obstacles between the product (a human body, metal object, or wall) and mobile phone or other device.
- Sensitivity of the Bluetooth communication may be affected in the following conditions:
  - When there is an obstacle between the product and the mobile phone or other product such as a human body, metal object, or a wall.
  - Were a wireless LAN is established or a microwave oven is being used near-by, or other electromagnetic wave is emitted.
- Since a Bluetooth device and a wireless LAN (IEEE802.11b/g) device use the same frequency ranges, wave interferences may occur when the product is used near a device equipped with a wireless LAN. This may cause deterioration in the communication speed and connection conditions. If this occurs, take the following measures:
  - Keep a distance of at the nearest 10 m from a wireless LAN device when you connect the product to the mobile phone.
  - Turn off the wireless LAN device in case you should use the product within 10 m from the wireless LAN device.
- It is not guaranteed that this product works with all devices enabled with Bluetooth wireless technology.
- Do not use the DPPA-BT1 outsides the area you purchased it. Depending on the areas, the use of this product may infringe the wave regulations and may be subject to its penalty.
- Sony cannot assume any responsibilities for any information leakage that may be caused in Bluetooth communications.
- Sony cannot accept responsibilities for any failure to satisfy the protection requirements resulting from a non-recommended modification or use of the product.
- For customer support information, please refer to the operating instructions of your printer.

Cautions

- Radio waves from a Bluetooth device may adversely affect the operations of electrical and medical devices, and could lead to accidents due to malfunctions. Make sure to turn off the product and mobile phone and do not use this product in the following places:
  - Inside the medical facilities, trains, airplanes, gas stations or other places that may emit flammable gas.
  - near automatic doors or fire alarms or other automatically controlled devices.
- Keep this product at least 22 cm away from cardiac pacemakers. Radio waves from this product may adversely affect the operation of cardiac pacemakers.
- Do not disassemble or modify this product. Doing so could result in injury, electric shock, or fire.

Printing from an external device

You can connect a mass-storage-complaint digital camera, a USB memory, a photo storage device, or other external device and print an image directly from the external device.

Notes

- We cannot guarantee connection with all types of mass storage devices.
- If a memory card is inserted in the printer, the printer cannot read the signal from an external device connected to the PictBridge/EXT INTERFACE connector of the printer. Remove the memory card, if any.

1 Set your digital camera or other external device ready for printing with the Mass Storage-compliant printer.

The settings and operations that are necessary before connection differ depending on the external device you use. For details, see the operating instructions of the external device. (In case of Sony Cyber-shot digital camera, for example, select "Normal" mode or "Mass Storage" mode for the "USB Connect".)

2 Connect the printer to the AC power source (→ Read This First).

3 Press ⏻ (on/standby) switch to turn on the printer.

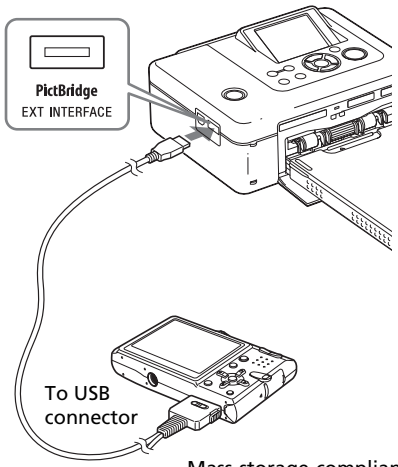
The ⏻ (on/standby) indicator of the printer lights in yellow green.

4 Connect a camera or an external device to the PictBridge/EXT INTERFACE connector of the printer.

Use the USB cable supplied with the digital camera or other external device, if necessary.

Printing in the direct mode is possible.

To PictBridge/EXT INTERFACE connector



Mass-storage-compliant USB memory, digital camera, photo storage device, or other external device.

Notes

- If you use a commercially available USB cable, please use the one shorter than 3 m in length.
- While the access indicator of the external device is flashing, never turn off the power of the printer or an external device nor remove the USB cable. The data inside the external device may be damaged. We cannot guarantee any damages that may be caused by data loss or damage.
- You cannot use a USB hub or a USB device equipped with a USB hub.
- Encoded or compressed date by fingerprint authentication or password cannot be used.
- The following Sony USB devices cannot be used since they contain fingerprint authentication system or a USB hub:
  USM16A/S, USM32A/S, USM64A/S, USM128A/S, USM256A/S, USM128B/BMS, USM64C, USM128C, USM128F

You can print the images from a PC by installing the supplied software on your PC and connecting it to the printer.

This section explains how to install the supplied software on your PC and how to use the supplied Picture Motion Browser software to print an image.

Please also refer to the operating instructions supplied with your PC for operating the PC.

Installation of the software is necessary only when you connect the printer to your PC for the first time.

On the supplied CD-ROM

The supplied CD-ROM contains the following software:

- Printer driver for DPP-FP70/FP90: The software describes the printer's requirements and enables printing from the PC.
- Picture Motion Browser: Sony's original software application that allows you to handle photographs and moving images—capturing, managing, processing, and printing.

Installing the software

System requirements

To use the supplied printer driver and Picture Motion Browser, your PC must meet the following system requirements:

OS: Microsoft Windows Vista (*1)/ Windows XP Professional (*2)/ Windows XP Home Edition/ Windows 2000 Professional (Service Pack 3 or later), pre-installed

(*1) Excluding Starter. In addition, the Picture Motion Browser does not support the 64-bit version.

(*2) The 64-bit version is not supported.

(Windows 95, Windows 98 Gold Edition, Windows 98 Second Edition, Windows NT, Windows Millennium Edition, other versions (ex. SP2 or former, or Server) of Windows 2000 are not supported.)

CPU: Pentium III 500MHz or faster (Pentium III 800MHz or faster is recommended.)

RAM: 128 MB or more (256 MB or more is recommended.)

Hard disk space: 200 MB or more (Depending on the Windows version you use, more space will be required. To handle image data, you will need additional hard disk space.)

Display:
Screen resolution:
800 x 600 pixels or more
Colors:
High Color (16-bit) or more

Required software: DirectX 9.0c or higher (Required for the Picture Motion Browser.)

Continued

Notes

- If a hub is used to connect the printer and your PC, or if two or more USB devices including other printers are connected to your PC, a trouble may occur. If this occurs, simplify the connections between your PC and the printer.
- You cannot operate the printer from another USB device being used simultaneously.
- Do not remove the USB cable from or connect it to the printer during data communication or printing. The printer may not work properly.
- Do not allow the PC connected to the printer to switch to standby mode or hibernation mode during printing. If you do so, the printer may not print properly.
- We cannot guarantee operations with all PCs, even though they may meet or exceed the system requirements.
- Picture Motion Browser supports the DirectX technology and the DirectX installation may be required.

  DirectX is available in the CD-ROM.
- If the Picture Motion Browser is installed on a PC on which the Cyber-shot Viewer is already installed, the Cyber-shot Viewer will be overwritten and replaced by the Picture Motion Browser. The browsing folders once registered in the Cyber-shot Viewer will be automatically registered in the Picture Motion Browser. When using the Picture Motion Browser, you can view the folders easier than you can when using the Cyber-shot Viewer, as the registered folders are displayed by group when viewing folders. With its improved red-eye reduction adjustment and newly-added tone curve adjustment, the Picture Motion Browser also offers more powerful editorial features. You can also use the software to write data into an external memory card for taking it outside.

Installing the printer driver

Follow the procedures below to install the driver.

Notes

- Before installing the driver, do not connect the printer to the PC .
- When using the Windows Vista/XP/2000, log on to Windows as a "Computer administrator" user account.
- Be sure to close all running programs before installing the software.
- The dialog boxes in this section are those in Windows XP, unless otherwise specified. The installation procedures and the dialog boxes shown differ depending on the operating system.

1 Turn on your PC, start Windows, and insert the supplied CD-ROM into the CD-ROM drive of your PC.
The installation window is displayed.

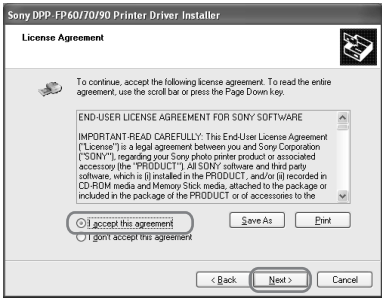
Note

In case the installation window is not automatically displayed, double-click the "Setup.exe" of the CD-ROM.

2 Click "Installing Printer Driver".

3 Click "Next".
The license agreement dialog box is displayed.

4 Read the agreement thoroughly, and if you agree, check "I accept this agreement" and click "Next".


Sony DPP-FP60/70/90 Printer Driver Installer
License Agreement
To continue, accept the following license agreement. To read the entire agreement, use the scroll bar or press the Page Down key.
END-USER LICENSE AGREEMENT FOR SONY SOFTWARE
IMPORTANT-READ CAREFULLY: This End-User License Agreement ("License") is a legal agreement between you and Sony Corporation ("SONY"), regarding your Sony photo printer product or associated accessory (the "PRODUCT"). All SONY software and third party software, which is (i) installed in the PRODUCT, and/or (ii) recorded in CD-ROM media and Memory Stick media, attached to the package or included in the package of the PRODUCT or of accessories to the
I accept this agreement
I don't accept this agreement
Save As
Print
< Back
Next >
Cancel

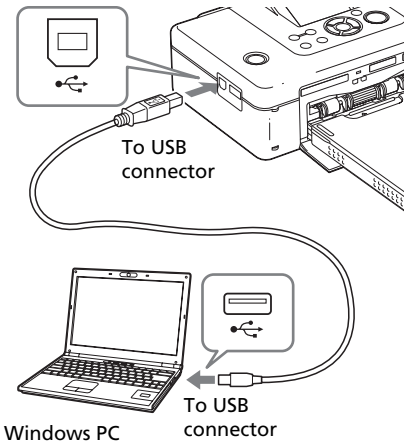
The setup starts.

5 When "Sony DPP-FP60/70/90 printer driver has been successfully installed." dialog is displayed, click "Finish".

6 Connect the printer to the AC power source (→ Read This First).

7 Press ⏻ (on/standby) switch to turn on the printer.

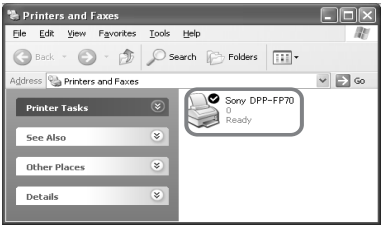
8 Connect the USB connectors of the printer and your PC with a USB cable (not supplied).
Printer driver installation starts automatically.



Note

Use a B-type USB cable shorter than 3m in length.

9 Wait for a while, then check to see that "Sony DPP-FP70" or "Sony DPP-FP90" is added to the "Printers and Faxes".



10 When the installation is complete, remove the CD-ROM from your PC and keep it for future use.
To continue to install the Picture Motion Browser software, follow the procedures from step 2 on page 42.

Notes

- If the installation fails, remove the printer from your PC, restart your PC, and then do the installation procedures from the step 2.
- After installation, the "Sony DPP-FP70" or "Sony DPP-FP90" is not set as the default printer. Set the printer you use for each application.
- The supplied CD-ROM will be required when you uninstall or re-install the printer driver. Keep it in good order for possible future use.
- Before you use the printer, read the Readme file (the Readme folder of the CD-ROM→English folder→Readme.txt).

When the software is installed

The is displayed on the Windows desktop, as well as a shortcut to the web site for printer customer registration. If you finish registration, you can find support information at:
http://www.sony.net/registration/di/

Continued

Uninstalling the printer driver

Remove the printer driver as follows:

1 Disconnect the USB cable (not supplied) from your printer and the PC.

2 Click "Start" - "Printers and Faxes".

3 Select "DPP-FP70" or "DPP-FP90", and click "Delete" from the "File" menu.
The confirmation dialog box is displayed.

4 Click "Yes".

5 Check to see that "DPP-FP70" or "DPP-FP90" is removed from the "Printers and Faxes" window.

6 Click "Server Properties" from the "File" menu, and click "Drivers" tab in the "Printers Server Properties" window.

7 Select "Sony DPP-FP70" or "Sony DPP-FP90" from the list box and click "Remove".
The confirmation dialog box is displayed.
When using the Windows Vista, deletion may not be possible. You can safely leave it as it is.

8 Click "Yes".

9 Click "Close" to close the "Printers Server Properties" window.

10 Click "Start" - "Control Panel".
The Control Panel window is displayed.

11 Open "Add or Remove Programs."

12 Select "Windows Driver Package – Sony DPP-FP60/70/90" and click "Change/Remove".
The confirmation dialog box is displayed.

13 Click "Yes".

Installing the Picture Motion Browser

Follow the procedures below to install the Picture Motion Browser.

Notes

- When using the Windows Vista/XP/2000, log on to Windows as a "Computer administrator" user account.
- Be sure to close all running programs before installing the software.
- The dialog boxes in this section are those in Windows XP, unless otherwise specified. The installation procedures and the dialog boxes shown differ depending on the operating system.

1 Turn on your PC, start Windows, and insert the supplied CD-ROM into the CD-ROM drive of your PC.
The installation window is displayed (page 40).

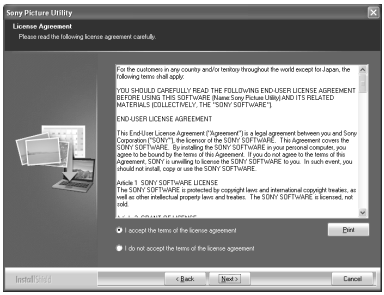
2 Click "Installing Picture Motion Browser".
The "Choose Setup Language" dialog box is displayed.

3 Select your language and click "Next."
The "Location settings" dialog box is displayed.

4 Select the "Region" and "Country/Area" where you use the printer and click "Next."
The "InstallShield Wizard" dialog box is displayed.

5 Click “Next.”
The license agreement dialog box is displayed.

6 Read the agreement thoroughly, and if you agree, check “I accept the terms of the license agreement” and click “Next”.


Sony Picture Utility
License Agreement
Please read the following license agreement carefully.
I accept the terms of the license agreement
I do not accept the terms of the license agreement
Print
< Back
Next >
Cancel

The dialog box used to specify the destination location is displayed.

7 Check the destination and then click “Next”.
The “Ready to Install the Program” dialog box is displayed.

8 Click “Install” and follow the instructions on the screen to proceed with installation.
When you are prompted to restart your PC, follow the displayed instructions to restart it.

9 When the installation is complete, remove the CD-ROM from your PC and keep it for future use.

Notes

- If the installation fails, perform the installation procedures from step 2 again.
- The supplied CD-ROM will be required when you uninstall or re-install the Picture Motion Browser. Keep it in a safe place for possible future use.

Uninstalling the Picture Motion Browser

When this software is no longer needed, remove it from your PC as follows:

1 Click “Start” - “Control Panel”.

2 Open “Add or Remove Programs.”

3 Select “Sony Picture Utility” and click “Change/Remove” .
The software uninstallation starts.

4 Click “Finish”.

Continued

Printing photos from the Picture Motion Browser

You can use the Picture Motion Browser to print an image from your PC using P size print paper.

1 Start the Picture Motion Browser window using either of the following methods:

- Double-click (Picture Motion Browser) on the Windows desktop.
- Click “Start” - “All Programs” (or “Programs” with Windows 2000) - “Sony Picture Utility” - “Picture Motion Browser.”

  The “Information Tool” window is displayed.

When the Picture Motion Browser is started for the first time

The dialog box to register a viewed folder is displayed. If images have already been saved in the “My Pictures” folder, click “Register Now.”

If you have saved images in a folder other than the “My Pictures” folder, click “Register Later.” Refer to ”To register a browsing folder” (page 48).

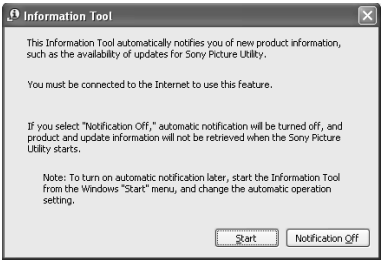
How to access the “My Pictures” folder

- In Windows 2000:

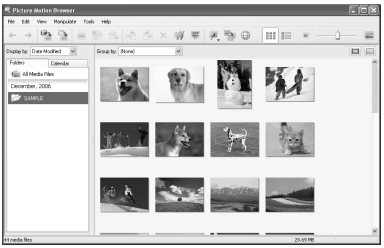
  Click “My Documents” - “My Pictures” on the desktop.
- In Windows Vista/XP:

  Click “Start” - “My Pictures” from the taskbar.

2 Click “Start”.


Information Tool
This Information Tool automatically notifies you of new product information, such as the availability of updates for Sony Picture Utility.
You must be connected to the Internet to use this feature.
If you select "Notification Off," automatic notification will be turned off, and product and update information will not be retrieved when the Sony Picture Utility starts.
Note: To turn on automatic notification later, start the Information Tool from the Windows "Start" menu, and change the automatic operation setting.
Start
Notification Off

The main window of the Picture Motion Browser is displayed.



To switch the display of the main window

There are 2 different versions of photo view used in the main window as follows:

To switch the view, click the tab “Folders” or “Calendar.”

- **“Folders” view**

  The images will be classified in each registered folder and are displayed as thumbnails.
- **“Calendar” view**

  The images will be classified according to the shot date and are displayed as thumbnails on each date of the calendar. In “Calendar” view, you can switch the display according to the year, month, or hour.

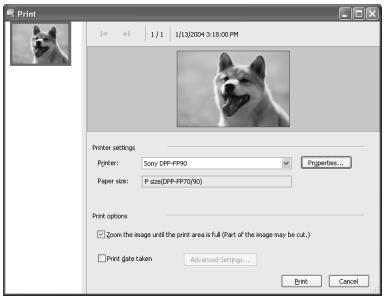
In this section, “Folders” view windows are used as examples.

3 Click the folder containing the photos you want to print.
As an example, the "sample" folder is selected in the following explanation.

4 Select the photos that you want to print and click (print).

The Print dialog box is displayed.

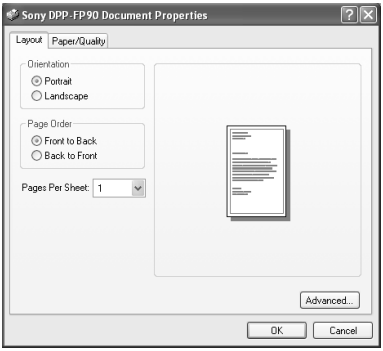
5 In the "Printer" drop-down list box, select "Sony DPP-FP70" or "Sony DPP-FP90". To set the paper orientation or other print options, go to step 6. To print, skip to step 11.



Items	Functions
Printer Settings	• Printer: Select the printer you are using: "Sony DPP-FP70" or "Sony DPP-FP90" • Paper size: To change the size, click "Properties". **Note:** In some regions, L size print paper is not sold.
Print Options	• Zoom the image until the print area is full: When checked, an image will be printed over the entire printing area of the paper. An edge of the photo may be cut. When unchecked, an image will be printed without cutting off. • Print date taken: When checked, an image is printed with the date of shooting if the image is a file recorded in the DCF (Design rule for Camera File system) format.
Properties	Specifies paper size, orientation, picture quality and other details.

6 To set the paper orientation or other print options, click "Properties".
The "Properties" dialog box of the selected printer is displayed. The printer driver of the printer utilizes the Universal Printer Driver, a Microsoft common printer driver . In the dialog boxes, there are some items that are not used in the printer.

7 In the "Layout" tab, specify the paper orientation or other options.

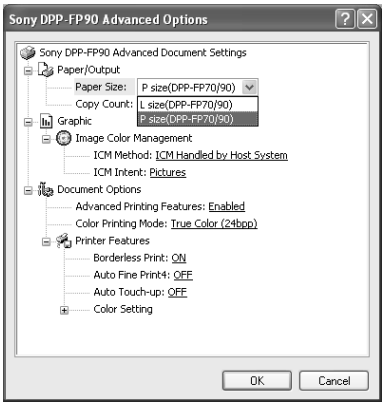


Continued

Items	Functions
Orientation	Select the orientation of an image when printed: • Portrait • Landscape
Page Order	Select the order of the pages when printed: • Front to Back • Back to Front
Pages Per Sheet	Specify the number of copies per sheet to be printed. Select “1”.
Advanced	Specifies the paper size or other options.

8 Click “Advanced”.

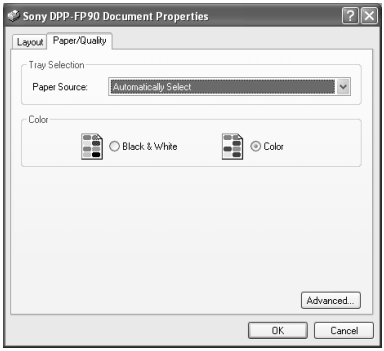
The “DPP-FP70/FP90 Advanced Options” dialog box is displayed.



Items	Functions
Paper/Output	• Paper Size: From the drop-down list box, select the paper size you actually use for printing: P size (post card size)/L size **Note:** L size print paper is not sold in some regions. • Copy Count: Specify the number of copies to be printed.
Graphic - Image Color Management	• ICM Method: The printer does not support the ICM method settings. Even when you select an option other than “ICM Disabled”, the printed results do not reflect the setting. Leave the option as it is. • ICM Intent: The printer does not support the ICM Intent settings. Leave the option as it is.
Document Options	• Advanced Printing Features: Select “Enabled” to turn on advanced printing options such as “Page Order”. If a compatibility problem occurs, disable this feature. • Color Printing Mode: To print in colors, select “True Color (24bpp)”. To print in monochrome, select “Monochrome”. For details, see the Windows help.

Items	Functions
Printer Features	• Borderless Print: To print an image without borders, select "ON". To print with borders, select "OFF". Depending on the application software, an image will be printed with borders even if "ON" is selected. Set an image to be printed fully in the print range. • Auto Fine Print4: Select from "Photo", "Vivid", or "OFF". When you select "Photo" or "Vivid", please select "ICM Disabled" for "ICM Method". Unlike direct printing from a memory card, no Exif data is referred. For details, see page 31. • Auto Touch-up: Select "ON" or "OFF". When you select "ON", please select "ICM Disabled" for "ICM Method". Unlike direct printing from a memory card, no Exif data is referred. For the details, see page 10. • Color Setting: You can change R, G, B, and sharpness settings. For the details, see page 32.

9 In the "Paper/Quality" tab, specify the color or paper source.



Items	Functions
Tray Selection	From the "Paper Source" drop-down list box, elect "Automatically Select".
Color	To print in colors, select "Color". To print in monochrome, select "Black & White".
Advanced	The "DPP-FP70/FP90 Advanced Options" dialog box is displayed. (page 46) For details, see step 8.

10 Click "OK".

The "Print" dialog box is displayed again.

11 Click "Print".

Printing starts. For the details of the properties of the Picture Motion Browser, see the Picture Motion Browser help.

Note

You cannot print a motion-picture file or RAW data files.

Continued

Tips

- To select serial still images in the image area of the main window, click the first image in the series and then click the last image while pressing the Shift key.

  To select multiple still images not in a sequence, click the images individually while pressing the Ctrl key.
- You can also print from an image preview.

To display the Windows help

Click ? on the upper right on the dialog box and then click the desired item on the screen.

To stop printing

1 Double-click on the printer icon on the taskbar, and open the "Print" dialog box.

2 Click the document name that you want to cancel printing of and then click "Cancel" from the "Document" menu.

The dialog box used for confirming the deletion is displayed.

3 Click "Yes."
The printing job is canceled.

Note

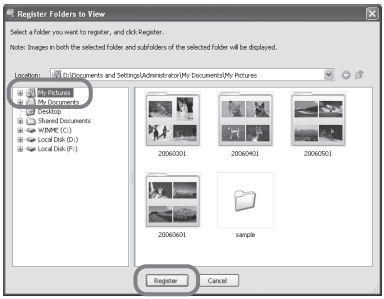
Do not remove the job being printed. Doing so may cause paper jam.

To register a browsing folder

The Picture Motion Browser does not allow you to view images saved on the PC hard disk directly. You must to register the browsing folder as follows:

1 Click "File"-"Register Viewed Folder," or click (Register Folders to View).
The "Register Folders to View" dialog box is displayed.

2 Select the folder you want to register and then click "Register."



Note

You cannot register the whole drive.

The confirmation dialog box for registration is displayed.

3 Click "Yes."
Registration of the image information in the data base starts.

4 Click "Close."

Notes

- The folder you select as the destination of the imported images will be registered automatically.
- You cannot cancel registration of the folder you register here.

To change the browsing folder

Click "Tools" - "Settings" - "Viewed folders."

Tips

- If a sub folder is contained in the source folder, the images in the sub folder will also be registered.
- When the software is first started, the message prompting you to register "My Pictures" will be displayed.
- Depending on the number of images, it may take some tens of minutes to register images.

Printing from a commercially-available application software

You can use a commercially-available application software to print an image from the DPP-FP70/FP90. Select "DPP-FP70" or "DPP-FP90" as "Printer" in the print dialog box, and select the print paper size in the page setup dialog box. For details in print settings, see steps 6 and 7 on pages 45 and 46.

On "Borderless Print" setting in the "Printer Features"

When using an application other than the Picture Motion Browser, an image might be printed with borders even if you select "ON" for the "Borderless Print" in the "Printer Features" of the "Sony DPP-FP70/FP90 Advanced Options" dialog box.

When you select the borderless print option, the printing range information for borderless print will be supplied to the application. Some applications, however, may arrange and print the image with borders within the specified range.

If this occurs, do the following to print an image without borders:

- When you can set print range with an application, set an image to be printed fully in the print range. For example, select "Full page photo print" or a similar option.

Orientation setting

Depending on the application software you use, orientation may not change even if you change portrait or landscape setting.

With border/borderless setting of the printer driver

When the application software you use has border/borderless setting, we suggest you select "ON" for the "Borderless Print" in the "Printer Features" of the "Sony DPP-FP70/FP90 Advanced Options" dialog box as the printer driver setting.

Print quantity setting

Depending on the application software you use, the print quantity setting of the application you use may have priority over the setting specified in the printer driver dialog box.

If trouble occurs

If you run into any problems using the printer, use the following guidance to solve the problem. If the problem persists, consult your Sony dealer.

Power

Symptom	Check	Cause/Solutions
The ⏻ (on/standby) switch cannot be turned on.	• Is the AC power cord properly connected?	→ Connect the AC power cord to an AC outlet securely. (→ Read This First)

Displaying images

Symptom	Check	Cause/Solutions
The LCD screen displays no images.	• Does the LCD screen of the printer show "Connecting"?	→ When a PictBridge camera or a PC is connected to the printer and the printer operates on the PictBridge/PC mode, no images will be displayed on the window. Operate with the PictBridge camera or PC. To display the images of a memory card or external device, remove the PictBridge camera or PC.
	• Are any error messages displayed (cause/remedies) on the LCD screen?	→ Follow the directions of the messages, if any, and try to solve the problem. (→ page 65)
	• Is the memory card or an external device properly inserted?	→ Insert a memory card or an external device properly. (→ Read This First)
	• Does the memory card or an external device contain images recorded with a digital camera or other device?	→ Insert a memory card or an external device that contains the recorded images. → Check the file formats that can be printed with the printer. (→ page 75)
	• Is the file format compatible with the DCF?	→ If an image is not compatible with the DCF, it may not be printed with the printer even if it is displayed on the PC monitor.

Symptom	Check	Cause/Solutions
Some images in the image list are not displayed or not printed even if they are displayed.	• Are thumbnail images displayed in the image list?	→ If the image is displayed but cannot be printed, the file used for printing is damaged. → If there are no images stored in the memory card or an external device, the "No image file" message appears. → If an image is not compatible with DCF (Design rule for Camera File system), it may not be printed with the printer even if it is displayed on the PC monitor.
	• Does the mark displayed below appear in the image list? • Was the image created on your PC?	→ If the mark shown on the left is displayed, the image may be a JPEG file created with your computer, or the thumbnail data is not contained. Select the mark and press ENTER to display its image preview. If an image is displayed, you can print the image. If the same mark is displayed again, the image is of incompatible file format and you cannot print it with the printer.
	• Does the mark displayed below appear in the image list? 	→ If the mark shown on the left is displayed, the image is of compatible file format but its thumbnail data or the data itself cannot be opened. Select the mark and press ENTER to display its image preview. If an image is displayed, you can print the image. If the same mark is displayed again, you cannot print it with the printer.
	• Are there more than 9 999 images saved in the memory card or an external device?	→ The printer can display, save, delete or handle up to 9 999 image files. If there are more than 9 999 images stored in a memory card or an external device, use the PC or PictBridge mode to display and handle the remaining images.

Continued

Symptom	Check	Cause/Solutions
Some images in the image list are not displayed or not printed even if they are displayed.	• Did you name or rename an image file with your PC?	→ When you name or rename an image file on your computer and its file name includes characters other than alphanumeric characters, the file name may not be displayed correctly or the image may not be displayed on the printer (read error).
	• Did you specify the print quantity in the image list?	→ Once you have selected images in the "Printing multiple images" procedures, you cannot print an image with which the cursor is just placed. Press ENTER to select it and specify the print quantity for the image. (→ Read This First)
	• There are 8 or more hierarchies in the memory card or an external device.	→ The printer cannot display the images saved in a folder of the 8th or higher hierarchy.
The file name is not displayed correctly.	• Did you change the file name of the image with your PC?	→ When you name or rename an image file on your computer and its file name includes characters other than alphanumeric characters, the file name may not be displayed correctly . For a file created with a PC application, the first 8 characters of its file name will be displayed as the file name.
In the Edit menu, there are blank areas at the top and bottom of the previewed image.	• Is the previewed image extremely stretched vertically or horizontally?	→ If an image is extremely stretched vertically or horizontally, blank areas may appear in the Edit menu. → The standard aspect ratio of an image shot with a digital camera is 3:4. When an image is edited or printed in the P size, it is saved as a more horizontal print image and its top and bottom edges will be cut and displayed in black.

Printing

Symptom	Check	Cause/Solutions
Paper does not feed.	• Is the print paper properly set in the paper tray?	→If print paper is not properly loaded, the printer may develop trouble. (➡Read This First) Check the following: • Insert the correct set of print paper and ink ribbon. • Load the print paper in the correct direction in the tray. • You can insert the maximum 20 sheets of print paper into the tray. If the sheets exceeds 20, remove the extra sheets. • Riffle the print paper thoroughly and insert them into the tray. • Do not bend or fold the print paper before printing, which may cause malfunction with the printer.
	• Does the ink ribbon or print paper run out?	→If an error message is displayed on the screen, check the error message.
	• Are you using print paper that was not designed for the printer?	→Use print paper designed for the printer. If you use incompatible print paper, the printer may develop trouble. (➡Read This First)
	• Is the print paper jammed?	→When the printer cannot feed the print paper, an error message is displayed. Check paper jam. (➡page 68)
The print paper emerges partially during printing in process.	• Is it in the middle of the printing process?	→The print paper may emerge a few times during printing. Do not touch nor pull the emerged paper. Wait for the print paper to be fully ejected after printing ends. As the print paper emerges from the rear a few times during printing, make sure to spare enough space behind the printer during printing. (10 cm or more)

Continued

Printed results

Symptom	Check	Cause/Solutions
The printed pictures are inferior in quality.	• Did you print preview image data?	→ Depending on the type of digital camera used, preview images may be displayed along with the primary images in the thumbnail list. The printed quality of the preview images will not be as good as the primary images. Note that if you delete the preview images, the data for the primary images may be damaged.
	• Did you print an image whose size (width or height) is smaller than 480 dots? Is the image displayed as follows? 	→ When the image is displayed as shown on the left, it is a small image. The printing quality is rough due to this small image size. → Change the image size setting of the digital camera you are using.
	• Did you use the Edit menu to enlarge the image?	→ An enlarged image, depending on its image size, will be printed with deteriorated picture quality.
	• Did you allow dust or finger prints to get on the printed surface?	→ Do not touch the printing surface (the shiny-side with no imprint). Fingerprints on the printing surface may result in imperfect printing.
	• Did you use used print paper or ink ribbon?	→ Do not print on used print paper. Or, do not use the used ink ribbon to print an image. Printing an image twice on the same paper will not make the printed image thicker.

Symptom	Check	Cause/Solutions
The printed pictures are inferior in quality.	• Did you shoot an image in the RAW file format?	→ When you shoot an image in the RAW file format, a highly-compressed JPEG file may be also recorded. As the printer does not support the RAW file format, it may use the JPEG file to print an image. A RAW file can be printed from a PC. For details, see the operating instructions of the digital camera you are using. **What is a RAW file?** A RAW file is an original image file format to save uncompressed, unprocessed still image data captured from a digital camera. For whether or not a digital camera can capture an image in the RAW file format, see the operating instructions of the digital camera.
	• Did you use an AdobeRGB-compliant digital camera, not compatible with the DCF 2.0, to shoot an image in the AdobeRGB mode?	→ An AdobeRGB image file that supports the DCF 2.0 will undergo color corrections, but an AdobeRGB image file that does not support the DCF 2.0 will be printed in vague colors without color corrections. **What is an AdobeRGB?** An AdobeRGB is a color space that the Adobe Systems Incorporated employs and uses as the default setting for image processing software including the Adobe Photoshop. The AdobeRGB, an optional color space extended with the DCF 2.0, determines the color ranges widely used in printing industry. For whether or not a digital camera supports the AdobeRGB, see the operating instructions of the digital camera.

Continued

Symptom	Check	Cause/Solutions
The picture quality and colors of the image previewed on the screen differs from those printed.		→ Because of differences in the phosphor method or profiles of a LCD screen, please regard the image being displayed on the display as just a reference. To adjust picture quality, do either of the following: – Menu - Print setup - Color Setting (➞page 32) – Menu-Edit-Adjust (➞page 14) (The setting takes effect only on the image being displayed.)
The printed image differs when an image is directly printed from the memory card or an external device inserted into the printer's slot and when it is printed via a PC.		→ Because of the differences in the printer's internal processing and PC software processing, the printed images will be different.
The date cannot be printed.	• Is "Date Print" set to "On"?	→ Set "Date Print" in the Print setup menu to "On". (➞page 32)
	• Does the image support DCF?	→ The "Date Print" function of this unit supports an image that is compatible with the DCF standards.
The date is printed unintentionally.	• Is "Date Print" set to "Off"?	→ Set "Date Print" in the Print setup menu to "Off". (➞page 32)
	• Was the date saved with the image when it was shot with the digital camera?	→ Change the camera settings.

Symptom	Check	Cause/Solutions
The image cannot be printed fully in the print range. Borders remains.	• Did you select "Pattern1" or "Pattern2" for "Borders" in the Print setup menu?	→ Set "Borderless" by selecting Menu - Print setup - Borders. (→ page 31)
	• Is the aspect ratio of the image correct?	→ Depending on the type of digital camera used, the aspect ratio of the recorded image differs, so the image may not be printed covering the entire printable area.
Even if "Borders" is set to "Borderless", the image is printed with borders on both sides.	• Is the image edited and saved with "Pattern1" or "Pattern2" settings?	→ When you edit and save an image with "Pattern1" or "Pattern2" settings, it is saved as a print image including the blank areas. Even if you print it with "Borderless" setting, you cannot eliminate the borders on both sides of a print. To print without borders, edit and save an image with "Borderless" setting. (→ page 31)
The whole area of an image cannot be printed.	• Did you set "Pattern1" in the Print setup menu?	→ You can print the whole area of an image by selecting "Pattern1" in the Print setup menu. (→ page 31)
The image is stretched horizontally when printed.	• Did you rotate the image or add other process?	→ Depending on the type of digital camera used, the image may be stretched vertically if it has been rotated or processed using your digital camera. This is not because of trouble with the printer, but because the image was rewritten with your digital camera.
The image is printed at an angle.	• Is the paper tray inserted properly?	→ Re-insert the paper tray firmly straight in to the end.
There are white lines or dots on the printed pictures.		→ The print head or paper path may be soiled. Use the supplied cleaning cartridge and sheet to clean the head and path.

Continued

Symptom	Check	Cause/Solutions
The picture is too bright, dark, reddish, yellowish, or greenish.		→ Adjust an image by selecting Menu - Edit - Adjust. (→page 14)
The eyes of the subject are red.		→ Press AUTO TOUCH-UP button to adjust the red-eye phenomenon. (→page 10)
Red-eye correction does not take effect with AUTO TOUCH-UP button.		→ Adjust for the red-eye phenomenon by selecting Menu - Edit - Red-eye correction. (→page 16)
Red-eye correction does not take effect with "Red-eye correction" menu.		→ Set the size of the adjustment frame to be two to seven times as large as the eye. (→page 16)
	• Did you enlarge, reduce the size of, rotate, or move an image after the red-eye correction?	→ Red-eye correction may not work properly if other editorial operations such as enlarging, reducing the size of, rotating, or moving an image. Perform these editorial operations first and then perform red-eye correction.

Settings

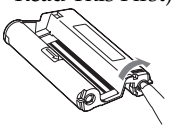
Symptom	Check	Cause/Solutions
The "Borderless" and "Pattern1/2" setting does not take effect.	• Are you operating the Creative Print menu?	→ In the Creative Print menu, templates are used and you cannot select border/borderless prints.

Saving or deleting an image

Symptom	Check	Cause/Solutions
You cannot save an image.	• Is the memory card or an external device protected?	→ Use your digital camera or external device to release the protection and then try saving again.
	• Is the write-protect switch of the memory card in the LOCK position?	→ Slide the write-protect switch to the write enable position. (→page 73)
	• Is the memory card full?	→ Delete unnecessary images (→page 28), or replace it with a new memory card with sufficient free memory space. Save the image again.
You cannot delete an image.	• Is the memory card or an external device protected?	→ Use your digital camera or external device to release the protection and try printing again.
	• Is the image DPOF-preset?	→ Release the DPOF preset with your digital camera.
	• Is the write-protect switch of the memory card in the LOCK position?	→ Slide the write-protect switch to the write enable position. (→page 73)
	• Are you using a "Memory Stick-ROM"?	→ You cannot delete an image from or format a "Memory Stick-ROM".
An image was deleted accidentally.		→ You cannot recover an image once it is deleted.
The "Memory Stick" cannot be formatted.	• Is the write-protect switch of the memory card is in the LOCK position?	→ Slide the write-protect switch to the write enable position. (→page 73)
	• Is it a "Memory Stick-ROM"?	→ You cannot delete an image from or format a "Memory Stick-ROM".
The "Memory Stick" was formatted accidentally.		→ Once the "Memory Stick" is formatted, all the data is deleted and cannot be recovered. To prevent accidental format, set the write - protect switch to the LOCK position. (→page 73)

Continued

Others

Symptom	Check	Cause/Solutions
You cannot insert the ink ribbon smoothly.		→ If the ink ribbon does not click into place, remove it and then re-insert it. Only when the ink ribbon is too slack to be loaded, wind the ink ribbon in the direction of the arrow to remove the slack. (→ Read This First) 
The ink ribbon cannot be removed.		→ Turn off the ⏻ (on/standby) switch and then turn it on. After the motor sound stops, try to remove the ink ribbon. If this does not solve the problem, contact Sony service facilities or your Sony dealer.
The print paper jams.	• Is an error message displayed ?	→ Paper is jammed. See "If paper jams" (→ page 68) and remove jammed paper from the printer. If jammed paper cannot be removed, contact the Sony service facilities.
Printing stops midway.	• The access indicator flashes in orange.	→ The data size of an image is large and it takes longer to process it for printing. As soon as the data processing finishes, the printer starts printing.
	• Is an error message displayed?	→ Paper is jammed. See "If paper jams" (→ page 68) and remove jammed paper from the printer. If jammed paper cannot be removed, contact the Sony service facilities.
	• Any indicators light or flash.	→ If no indicator is lit, the thermal head may be overheated. Leave the printer until the head cools down and the printer resumes printing.

Connecting with a digital camera

Symptom	Check	Cause/Solutions
The PictBridge mark does not appear on the LCD screen of the digital camera.	• Is the digital camera connected correctly?	→Connect the cable correctly.
	• Is the ⏻ (on/standby) switch turned on?	→Turn on the ⏻ (on/standby) switch
	• Does the firmware of your digital camera support the printer?	→See the manual supplied with your camera, or consult with the manufacturer.
	• Is "Connecting" displayed?	→The message is not displayed while the printer is in the Edit, Creative Print, or other menu modes. Exit the menu and then connect the cable again. →Disconnect the digital camera and the printer and then connect them again. Or turn off and then on the printer and the digital camera.
	• Is the USB setting of your camera in PictBridge mode?	→ Set the USB setting of your camera to the PictBridge mode.
	• Is printing in process?	→Connect the cable again after printing is complete.
You connect and disconnect the USB cable, but nothing happens.		→The printer has developed an over-current error. Unplug the AC power cord of the printer, plug it in again, and then press the ⏻ (on/standby) switch to recover from the error.
You cannot stop printing even if you pressed CANCEL.		→The next print from the one currently printed will be canceled. →Depending on the digital camera you use, you cannot cancel printing from the printer. Operate the digital camera to stop printing. Refer to the operating instructions of the digital camera.
You cannot make Index printing.	• Is the message "Could not create printing data for some images." displayed?	→The printer cannot print Index print of the DPOF printing. To make Index printing, insert the memory card directly (➞Read This First) or use a mass storage external device (➞page 38).

Continued

Connecting with a computer

Symptom	Check	Cause/Solutions
The images of the memory card or an external device inserted in the printer are not displayed on the PC.		→ The printer does not provide the function for viewing the memory card or an external device images from the printer.
You lost the supplied CD-ROM and want to obtain a new one.		→ Please download the printer driver from the Customer support home page (➞page 77). Or contact your Sony dealer.
The printer driver cannot be installed.	• Are you sure that you have followed the installation procedures correctly?	→ Follow the procedures in the operating instructions to install the driver (➞page 40). If an error occurs, restart your computer and do the installation procedures again.
	• Is another application program running?	→ Exit all applications and then install the driver again.
	• Did you specify the CD-ROM as the installation CD-ROM correctly?	→ Double-click My Computer, and then the CD-ROM icon in the open window. Follow the procedures in the operating instructions to install the driver.
		→ The USB driver may not be installed properly. Follow the operating instructions to install the USB driver again.
	• Can you read the CD-ROM with Explorer?	→ If there is an error with the CD-ROM, you may not be able to read it. If an error message is displayed on your PC, check the contents and remove the source of the problem. Then install the printer driver again. For details on the error contents, see the operating instructions of your PC.

Symptom	Check	Cause/Solutions
The printer driver cannot be installed.	• Is there an anti-virus program or other program running on the system?	→ If there is an anti-virus program or other program running on the system, exit it and then start installing the driver.
	• Did you log onto Windows Vista/XP/2000 Professional using an Administrator user account?	→ To install the driver in Windows Vista/XP/2000 Professional, log onto Windows using an Administrator user account.
The printer does not respond to the printing order from the PC.		→ If there is no trouble displayed on the Windows desktop, check the printer's LCD screen. If the printer shows trouble, do the following: 1. Turn off the ⏻ (on/standby) switch then turn it on again. 2. Disconnect the power cable, wait for 5 to 10 seconds, and then connect the cable again. 3. Restart your computer. If these do not solve the problem, consult with your Sony dealer or service facilities.
	• Is an error message displayed stating that an error was detected in output of documents via USB?	→ Remove the USB cable and then connect it again.
An image is printed with borders even if I select "Borderless".	• Are you using an application software other than Picture Motion Browser?	→ When using an application other than the Picture Motion Browser, an image might be printed with borders even if you select borderless print. When you can set border/borderless with an application, set an image to be printed fully in the print range even if it is printed over the range.

Continued

Symptom	Check	Cause/Solutions
Print quantity specified in the "Pages Per Sheet" in the "Layout" tab of the "Sony DPP-FP70/FP90 Properties" dialog box does not match the actual print quantity and printed results.		→ Depending on the application you use, the print quantity setting of the application you use may have priority over the setting specified in the printer driver dialog box.
Colors of the printed image from a PC are different from those printed from a memory card.		→ Since the process in printing an image from a memory card differs that in printing from a PC, the colors may not be exactly identical.

If an error message appears

If an error occurs, the following error messages may be displayed on the LCD screen. Follow the solution described here to solve the problem.

Printer

Error messages	Meaning/Solutions
Error occurred with printer. Turn it off and on, then retry.	→ An error has occurred with the printer. Unplug the AC power cord of the printer, connect it again and then try operating again. If this occurs again, consult with your Sony dealer or Sony service facilities.

Memory cards and external device

Error messages	Meaning/Solutions
No Memory Stick./No CompactFlash card./No SD Card./ No External Device.	→ A memory card or an external device is not inserted into their slot. Or the external device is not connected. Insert the memory card or an external device. (→Read This First)
An incompatible Memory Stick/ CompactFlash card/SD Card/ External Device is inserted.	→ A memory card or an external device that the printer does not support is inserted. Use a compatible memory card or device. (→pages 72 to 75)
No image file.	→ There are no image files in the memory card or an external device that the printer can handle. Connect a memory card or device that contains images that can be displayed with the printer.
No DPOF file.	→ There are no DPOF-preset image files in the memory card or an external device. Specify the print (DPOF) mark with your camera.
Cannot delete a protected image.	→ To delete a protected image, cancel protection on your camera.
You cannot delete a DPOF image.	→ To delete a DPOF-preset image, cancel the print (DPOF) mark on your camera.

Continued

Error messages	Meaning/Solutions
Protected. Cancel protect then try again.	→ The "Memory Stick" is write-protected. Release the write-protection. (→page 73)
The Memory Stick/CompactFlash card/SD Card/External Device is full.	→ There is no free memory space in the selected memory card or external device. Delete unnecessary images or replace with a one having sufficient memory space.
The Memory Stick/CompactFlash card/SD Card/External Device has trouble.	→ An error may have occurred. If these messages appear frequently, check the memory card or an external device status with another device. *In case of an external device An external device might be write-protected. Release the write-protection setting of the device you use. A built-in memory of a digital camera may be write-protected.
Write error in the Memory Stick/ the CompactFlash card/the SD Card/the External Device.	
Memory Stick Format Error	
Memory Stick is protected.	→ A protected "Memory Stick" is inserted. To save or edit the images with the printer, use the device you are using to cancel protection.

External devices and PictBridge-compliant devices

Error messages	Meaning/Solutions
Incompatible USB device. Check device's USB setting.	→ A USB device that the printer does not support may be connected. Or, the USB settings of the connected device may be incompatible. Refer to the operating instructions of the USB device you are using.
USB hub or device with built-in hub not supported.	→ Connect the device directly to the printer or use a device that does not contain a USB hub function.
Write error in External Device.	→ An external device might be write-protected. Release the write-protection setting of the device you use. A built-in memory of a digital camera may be write-protected.

Ink ribbon

Error messages	Meaning/Solutions
No ink ribbon. Insert ink ribbon and press [PRINT].	→ The ink ribbon is not inserted in the printer. Set the ink ribbon into the printer. (→ Read This First) If "cleaning cartridge" is displayed, set the cleaning cartridge.
No ink ribbon. Insert P size ink ribbon and press [PRINT].	
End of ink ribbon	→ Replace it with a new ink ribbon. (→ Read This First)
End of ink ribbon. Insert P size ink ribbon and press [PRINT].	
Ink ribbon type incorrect. Insert P size ink ribbon and press [PRINT].	→ Set a ink ribbon and print paper of the displayed size. (→ Read This First)

Print paper

Error messages	Meaning/Solutions
No paper tray. Insert paper tray containing P size print paper and press [PRINT].	→ There is no print paper in the printer. – The paper tray is not set in the printer. – The print paper is not set in the paper tray. – The print paper has run out. In either case, set the print paper in the tray and set the paper tray into the printer. (→ Read This First)
No print paper. Set the print paper for the P Size and press [PRINT].	
Cleaning sheet is not placed. Set the cleaning sheet and press [PRINT].	→ There is no cleaning sheet in the paper tray. Insert the cleaning sheet into the paper tray and set the paper tray into the printer.
Wrong print paper. Set the print paper for the P Size and press [PRINT].	→ The print paper and ink ribbon do not match. Check the ink ribbon size actually loaded in the printer and set the print paper for the identical size. (→ Read This First)
Paper jam. Remove Print Paper.	→ Paper jams. See "If paper jams" (→ page 68) and remove jammed paper from the printer. If the jammed paper cannot be removed, contact the Sony service facilities.

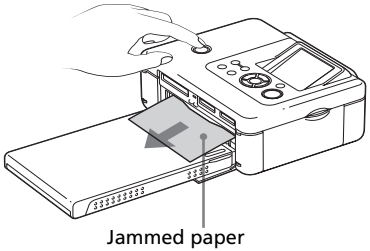
If paper jams

If the print paper jams, an error message is displayed and you cannot make printing.

Please do not remove the paper tray and ink ribbon from the printer, and remove the jammed paper.

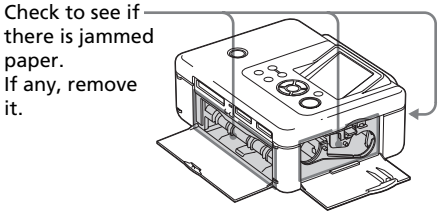
In case you removed the paper tray, do not re-insert the paper tray until the jammed paper is ejected.

1 Turn off the power of the printer and then turn it on.
Please wait for the print paper to be ejected automatically.



2 Remove the ejected print paper from the printer.

3 Remove the paper tray and ink ribbon from the printer and check to see if there is no jammed print paper inside.



Note

If you cannot remove the jammed paper, contact your Sony dealer.

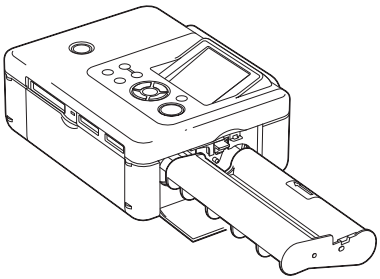
Cleaning the inside of the printer

If white lines or periodical dots are printed on the pictures, use the cleaning cartridge and cleaning sheet supplied to clean inside the printer.

Before start cleaning the printer, please remove a memory card, external device, or USB cable from the printer.

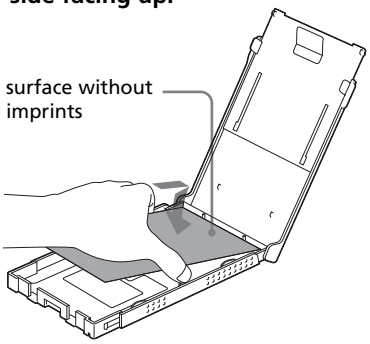
1 Open the ink ribbon compartment door and if there is an ink ribbon for printing, remove it.

2 Insert the supplied cleaning cartridge into the printer and close the ink ribbon compartment door.



3 Remove the paper tray from the printer. If there is print paper in the tray, remove it.

4 Place the cleaning sheet into the paper tray **with the no-imprint side facing up.**



5 Set the paper tray into the printer and press PRINT.
The cleaning cartridge and cleaning sheet will clean inside the printer. After the cleaning is finished, the cleaning sheet is automatically ejected.

6 Remove the cleaning cartridge and sheet from the printer.

Tip

Keep the cleaning cartridge and cleaning sheet together for future cleaning.

When cleaning ends

Set the ink ribbon and print paper into the printer.

Notes

- Carry out cleaning when there are white lines or dots on the print.
- When you can obtain proper printing performances, cleaning will not improve the printed picture quality.
- Do not place the cleaning sheet on the print paper and carry out cleaning, which may cause paper jam or other troubles.
- If a cleaning does not improve printed picture quality, please carry out cleaning a couple of times.
- You cannot clean the printer while it is connected to a PC or a PictBridge camera.

Precautions

On safety

- Be careful not to set or drop any heavy objects on the power cord, or to damage the power cord in any way. Never operate this printer with a damaged power cord.
- Should any solid object or liquid fall into the cabinet, unplug the printer and have it checked by qualified personnel before operating it any further.
- Never disassemble the printer.
- To disconnect the power cord, pull it out by the plug. Never pull the power cord itself.
- When the printer is not going to be used for an extended period of time, disconnect the power cord from the wall outlet.
- Do not handle the printer roughly.
- To reduce the risk of electrical shock, always unplug the printer from the electrical outlet before cleaning and servicing the printer.

On installation

- Avoid placing the printer in a location subject to:
  – vibration
  – high humidity
  – excessive dust
  – direct sunlight
  – extremely high or low temperatures
- Do not use electrical equipment near the printer. The printer will not work properly in electromagnetic fields.
- Do not place heavy objects on the printer.
- Leave enough room around the printer so that the ventilation holes are not blocked. Blocking these holes may cause internal heat build-up.

On the AC adaptor

- Be sure to use the AC adaptor supplied with the printer. Do not use other AC adaptors, as this may cause a malfunction.
- Do not use the supplied AC adaptor to other devices.
- Do not use an electrical transformer (travel converter), as this may cause overheat or a malfunction.
- In case the cord of the AC adaptor is damaged, never use it any longer, as this may cause danger.

On moisture condensation

If the printer is brought directly from a cold location to a warm location or placed in an extremely warm or humid room, moisture may condense inside the unit. In such cases the printer will probably not work properly and may even develop a fault if you persist in using it. If moisture condensation occurs, unplug the AC power cord of the printer and do not use the printer for at least one hour.

On transport

When you transport the printer, remove the ink ribbon, paper tray, AC adaptor, the memory card, or an external device from the printer and put the printer and its peripherals in the original box with the protective packaging.

If you no longer have the original box and packing parts, use similar packing material so that the printer will not be damaged while being transported.

On cleaning

Clean the cabinet, panel and controls with a soft dry cloth, or a soft cloth lightly moistened with a mild detergent solution. Do not use any type of solvent, such as alcohol or benzine, which may damage the finish.

On restrictions on duplication

If duplicating documents with the printer, pay special attention to the following:

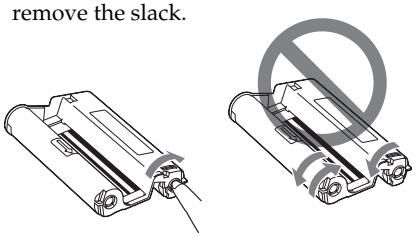
- Duplication of banknotes, coins, or securities is against the law.
- Duplication of blank certificates, licenses, passports, private securities, or unused postal stamps is also against the law.
- TV program, films, video tapes, others' portraits or other materials may be copyrighted. Unauthorized video printing of such materials may infringe the provisions of the copyright law.

On color print packs

Notes on use

On Ink ribbon

- Do not touch the ink ribbon or place the ink ribbon in a dusty location. Fingerprints or dust on the ink ribbon may result in imperfect printing.
- Do not rewind the ink ribbon and use the rewound ink ribbon for printing. Otherwise, proper printing result will not be obtained, or even a malfunction may occur.
  If the ink ribbon does not click into place, remove it and then re-insert it. Only when the ink ribbon is too slack to be loaded, wind the spool of the ink ribbon in the direction of the arrow to remove the slack.



- Never disassemble the ink ribbon.
- Do not pull out the ribbon from the ink ribbon.
- Do not remove the ink ribbon while printing.

On print paper

- The side without the imprinting is the printing surface. Inferior print quality may result if the printing surface is contaminated with dust or fingerprints. Be careful to avoid touching the printing surface.
- Do not bend the paper or tear it off at the perforations before printing.
- To avoid paper jam or malfunctions of the printer, make sure the following before printing:
  - Do not write or type on the print paper. Use the oil ink pen to write on the paper after printing. You cannot type on the print paper using an ink-jet printer, etc.
  - Do not attach sticker or stamps on the print paper.
  - Do not fold or bend the print paper.
  - Total number of print paper does not exceed 20 sheets.
  - Do not print on the used print paper. Printing an image twice on the same paper will not make the printed image thicker.
  - Use the print paper for this printer only.
  - Do not use the print paper ejected without printed.
- Do not print on used sheets of print paper or attempt to rewind the ribbon inside the ink ribbon. Doing so could result in damages to the printer.
- Do not remove the paper tray while printing.

Continued

Notes on storing print packs

- When you are going to store a partially-used pack of the ink ribbon and print paper for an extended period of time, store it in its original bag or in a similar container.
- When you are going to store print paper in the paper tray, make sure to close the tray cover and slide cover.
- Avoid placing the ink ribbon in locations subject to high temperature, high humidity, excessive dust, or direct sunlight. Please store it in a dark and cold location and use it early. Depending on the storage status, color elements of the ink ribbon may deteriorate. Sony shall assume no responsibilities for any damage, loss or failed printed results that may be caused by use of such ink ribbon.
- Avoid leaving the printing surface of the print paper in contact with a plastic eraser or plastic desk mats that includes vinyl chloride or plasticizer for an extended period of time; color changes or deterioration of the printed image may occur.

About the Memory Cards

About the "Memory Stick"

What is "Memory Stick"?

"Memory Stick" is a compact-size IC recording medium with a large capacity. It has been designed not only for exchanging/sharing digital data among "Memory Stick" complaint products, but also for serving as an insertable/removable external storage medium that can save data.

Types of "Memory Stick" that the printer can use

With the printer, you can use the following types of "Memory Stick"*3:

Memory Stick type	Displaying/ Printing	Deleting/Saving/Formatting
Memory Stick (Not compatible with MagicGate)	OK	OK
Memory Stick (MagicGate Compatible)	OK*1	OK*1
MagicGate Memory Stick	OK*1	OK*1
Memory Stick PRO*2	OK*1	OK*1
Memory Stick Micro (M2*4)	OK*1	OK*1

*1 Data reading/recording that requires "MagicGate" copyright protection cannot be performed. "MagicGate" is the general name of a copyright protection technology developed by Sony using authentication and encryption.

*2 The printer is equipped with a slot compatible with both standard-size and Duo-size media. Without a Memory Stick Duo adaptor, you can use both standard-size "Memory Stick" and compact-size "Memory Stick Duo".

*3 The printer supports FAT32. The printer has been demonstrated as operable with a "Memory Stick" with a capacity of 8GB or smaller manufactured by Sony Corporation. However, we do not guarantee the operations of all the "Memory Stick" media.

*4 "M2" is an abbreviation for "Memory Stick Micro". In this section, "M2" is used to describe "Memory Stick Micro".

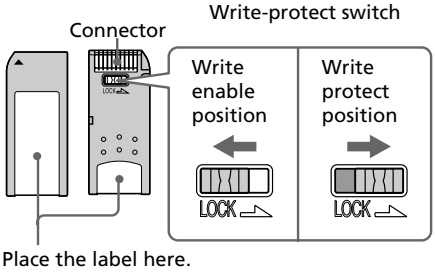
For the latest information on available medium or others, access the following home page:

http://www.memorystick.com/en/support/support.html

Select the area where you use your printer, and then select "Digital Printer" from each area page.

Notes on use

- For the latest information on the "Memory Stick" that the printer supports, see the "Memory Stick" compatibilities information on the Sony web site.
- Do not insert multiple "Memory Stick" at the same time, which may cause trouble with the printer.
- When using a "Memory Stick", make sure to check correct insertion direction. Wrong usage may cause trouble with the printer.
- When using the "Memory Stick Micro" with the printer, always insert it into an M2 adaptor.
- If you insert the "Memory Stick Micro" into the printer without an M2 adaptor, you may be unable to remove the "Memory Stick Micro".
- If you insert the "Memory Stick Micro" into an M2 adaptor, and insert the M2 adaptor into the Memory Stick Duo adaptor, the printer may not operate properly.
- Do not place the "Memory Stick Duo", an "Memory Stick Duo"-sized M2 adaptor, or M2 media within the reach of a small child to prevent him from swallowing it by accident.
- Avoid removing the "Memory Stick" from the printer while the printer is reading or writing data.
- Data may be damaged in such occasions:
  - "Memory Stick" is removed or the printer is turned off during a read or write operation.
  - "Memory Stick" is used in a location subject to static electricity or electrical noises.
- We recommend that you save backup of the important data.
- The data processed with the computer may not be played with the printer.
- When you format a "Memory Stick", use the format function of the printer or your digital camera. If you format a "Memory Stick" with your computer, images may not be displayed properly.
- When you format a "Memory Stick", all the data including the protected image files will be erased. To avoid erasing important data by accident, make sure to check the content before formatting.
- You cannot record, edit or delete data if you slide the write-protect switch to LOCK.



- When you use a "Memory Stick Duo" without the write-protect switch, be careful not to edit or delete the data by accident.
- When you slide the write-protect switch of the "Memory Stick Duo", use a thin-pointed device.
- Do not attach any other material than the supplied label on the labeling position. When you attach the supplied label, be sure to attach it to the labeling position. Be careful that the label does not stick out.
- When you write on the memo area of the attached label, do not write forcefully.
- When you carry or store the "Memory Stick", put it in the case designed for the "Memory Stick".

Continued

- Do not touch the terminal of the “Memory Stick” with your hand or a metal object.
- Do not strike, bend or drop the “Memory Stick”.
- Do not disassemble or modify the “Memory Stick”.
- Do not expose the “Memory Stick” to water.
- Do not use or store the “Memory Stick” under the following conditions:
  - Locations beyond the required operational conditions including locations such as the hot interior of a car parked in the sun or/ and in the summer, the outdoors exposed to direct sunlight, or a place near a heater.
  - Humid locations or locations with corrosive substances present

About the SD card

The SD card slot of the printer allows you to use the following:

- SD memory card*1
- miniSD card
- SDHC memory card*2
- MMC standard memory card*3

We do not guarantee proper operations for all types of SD memory cards and MMC standard memory cards.

*1 The printer has been demonstrated as operable with an SD card with a capacity of 2 GB or smaller.

*2 The printer has been demonstrated as operable with an SDHC card with a capacity of 4 GB or smaller.

*3 The printer has been demonstrated as operable with an MMC standard memory card with a capacity of 2 GB or smaller .

Notes on use

- When using a card, make sure to check correct insertion direction of the card and correct insertion slot.
- You cannot read or write the data subject to the copyright protection.
- Do not strike, drop, or bend a card.
- Do not disassemble or modify a card.
- Do not expose a card to water.
- Avoid using a card in areas subject to high humidity, since it may be easily affected by the humidity.
- Do not use or store a card in a location subject to:
  - extremely high temperature such as the hot inside of a car or the outdoors exposed to a direct sunlight, or a place near a heater.
  - direct sunlight
  - high humidity or corrosive substances
  - static electricity or electrical noises
- When you carry or store a card, put it in the case supplied with it.
- Do not remove a card or turn off the printer while the printer is reading or writing data and the access indicator is flashing. Otherwise, data may be rendered unreadable or erased.

About the CompactFlash card

The CompactFlash card slot of the printer allows you to use the following:

- CompactFlash Storage Card (Type I/ Type II) and CF+Card (Type I/Type II)-compatible CompactFlash Storage Card*4.
- Micro Drive
- COMPACT VAULT

You can also use the following by using a commercially available CompactFlash card adaptor*5:

- Smart Media card*5
- xD-Picture Card*5

However, we do not guarantee proper operations for all types of CompactFlash cards.

*4 Use a CompactFlash card with a power specification of 3.3V or 3.3V/5V. You cannot use a type for 3V or 5V only. Do not insert other types of CompactFlash card into the printer’s insertion slot. The printer may be damaged.

*5 When using a commercially available CompactFlash card adaptor, refer to the operating instructions of the adaptor you use for how to install the card and adaptor.

When using the CompactFlash card adaptor, the write-protected card may not work properly.

Notes on use

- When using a card, make sure to check correct insertion direction of the card and correct insertion slot.
- Do not strike, drop, or bend a card.
- Do not disassemble or modify a card.
- Do not expose a card to water.
- Avoid using a card in areas subject to high humidity, since it may be easily affected by the humidity.
- Do not use or store a card in a location subject to:
  - extremely high temperature such as the hot inside of a car or the outdoors exposed to a direct sunlight, or a place near a heater.
  - direct sunlight
  - high humidity or corrosive substances
  - static electricity or electrical noises
- When you carry or store a card, put it in the case supplied with it.
- Do not remove a card or turn off the printer while the printer is reading or writing data and the access indicator is flashing. Otherwise, data may be rendered unreadable or erased.

Specifications

■ Printer

Printing method

Dye sublimation printing (Yellow/Magenta/Cyan 3 pass)

Resolution

300 (H) x 300 (V) dpi

Image processing per dot

256 levels processing (8 bits for each Yellow/Magenta/Cyan)

Printing size

P (Post Card/4 x 6 inch) size:
101.6 x 152.4 mm (maximum, borderless)

Printing time (per sheet)

Memory card[*1*2*3*4]: Approx. 45 sec.
PictBridge[*3*5]: Approx. 56 sec.
Via PC[*6]: Approx. 50 sec.

Input/Output connectors

USB (Full Speed) for PC connection
PictBridge/EXT INTERFACE connector

Slot

"Memory Stick" insertion slot
SD Card insertion slot
CompactFlash card insertion slot

Compatible image file formats

JPEG: DCF 2.0 compatible, Exif 2.21 compatible, JFIF[*7]
TIFF: Exif 2.21 compatible
BMP[*8]: 1, 4, 8, 16, 24, 32 bits Windows format

Some image file formats are not compatible.

Continued

Maximum number of pixels to be handled

8 000(H) x 6 000(V) dots

(Excluding Index Print and part of Creative Print)

Maximum number of files to be handled

9 999 files for a memory card/an external device

Ink ribbon/Print Paper

See supplied "Read This First".

LCD screen

LCD panel:

DPP-FP70: 6.2 cm (2.5 type) TFT drive

DPP-FP90: 9.0 cm (3.6 type) TFT drive

Total number of dots:

DPP-FP70: 115 200 (480 x 240)

DPP-FP90: 230 400 (320 RGB x 240)

Power requirements

DC IN jack, DC 24V

Power consumption

While printing: 80 W (maximum)

On standby mode: less than 1W

Operating temperature

5 °C to 35 °C (41 °F to 95 °F)

Dimensions

[DPP-FP70]

Height: Approx. 63 mm ($2\,^{1}/_{2}$ inches) (printer)
Approx. 72 mm ($2\,^{7}/_{8}$ inches) (including LCD projecting parts)

Width: Approx. 180 mm ($7\,^{1}/_{8}$ inches)

Depth: Approx. 137 mm ($5\,^{1}/_{2}$ inches) (excluding a handle)
Approx. 149 mm ($5\,^{7}/_{8}$ inches) (including a handle)

[DPP-FP90]

Height: Approx. 66 mm ($2\,^{5}/_{8}$ inches)

Width: Approx. 180 mm ($7\,^{1}/_{8}$ inches)

Depth: Approx. 137 mm ($5\,^{1}/_{2}$ inches) (excluding a handle)
Approx. 149 mm ($5\,^{7}/_{8}$ inches) (including a handle)

Depth when the paper tray is installed: Approx. 169 mm ($6\,^{3}/_{4}$ inches) longer than the above depth.

Mass

DPP-FP70: Approx. 1.1 kg (2 lb 7 oz)

DPP-FP90: Approx. 1.2 kg (2 lb 10 oz)

(excluding the paper tray, ink ribbon, AC power adaptor)

Supplied accessories

See supplied "Read This First".

■ AC power adaptor AC-S2422

Power requirements

AC 100V to 240 V, 50/60 Hz, 1.5A to 0.75 A

Rated output voltage

DC 24 V, 2.2 A (Peak 3.7 A, 6.5 s)

Operating temperature

5 °C to 35 °C (41 °F to 95 °F)

Dimensions

Approx. 60 x 30.5 x 122 mm ($2\,^{3}/_{8}$ x $1\,^{1}/_{4}$ x $4\,^{7}/_{8}$ inches)

(w/h/d, excluding protruding parts and cables)

Mass

Approx. 305 g (11 oz)

Design and specifications are subject to change without notice.

* The total number of sheets of P size print paper that the printer can print is estimated to be approximately 2,000. For the total number of sheets, please check “Printer Information Display” of the “Display/Printer setup” menu (page 34).

*1: Print Settings: Borderless, No time stamp, AutoFine Print 4: ON (Photo)

*2: When printing a photo (4.22 MB file size) taken by a Sony digital still camera containing effective picture elements of approximately 10,100,000 or equivalent.

*3: Print Speed: Time from when the PRINT button is pressed to when printing is finished. (The printing time may vary depending on a used equipment, a format of an image, a used memory card, settings of an application and operating conditions.)

*4: When printing from a “Memory Stick PRO Duo” inserted in the printer ’s slot

*5: When printing via DSC-N2 connected by USB cable. Time from when the “PRINT” button on the OSD of the camera is pressed to when the printing is finished.

*6: The time for data processing and transferring is excluded.

*7: Baseline JPEG with 4:4:4, 4:2:2, or 4:2:0 format

*8: You cannot print using the Picture Motion Browser.

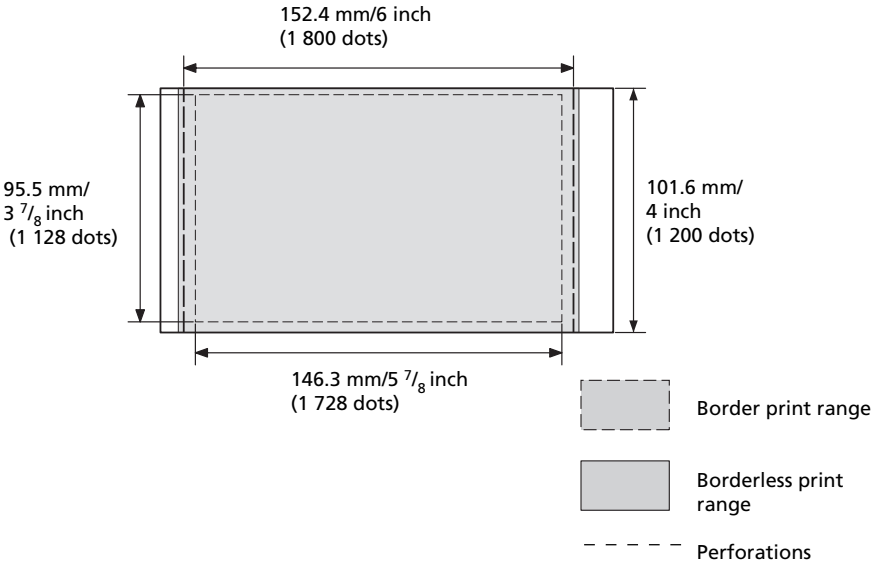
Customer support home page

The latest support information is available at the following home page address:

http://www.sony.net/

Printing range

P size



The above illustrations are those when an image with a 2:3 aspect ratio is printed.
The printing range differs for a border or a borderless print.

Glossary

DCF (Design rule for Camera File system)

This camera conforms with the DCF (Design rule for Camera File system) standard established by JEITA (Japan Electronics and Information Technology Industries Association) to maintain file exchangeability and compatibility between digital cameras and related products. Complete exchangeability and compatibility, however, are not guaranteed.

DPOF (Digital Print Order Format)

The format used to record the information necessary for automatically printing images shot by a digital camera at a printing shop or with a home-use printer. The printer supports DPOF printing and can automatically print the preset number of copies of the DPOF preset images.

Exif 2.21 (Exif Print)

Exif (Exchangeable image file format for digital cameras) Print is a global standard for digital photo printing. A digital camera supporting Exif Print stores the data relevant to the conditions of shooting as each shot is taken. The printer utilises the Exif Print data stored in each image file to ensure the printed result matches the original shot as closely as possible[*1].

*1 When the "Auto Fine Print 4" is enabled and an image (JPEG file) is shot by an Exif Print (Exif 2.21)-compliant digital camera, the image is automatically adjusted to its optimum picture quality and printed.

"Memory Stick"/CompactFlash card/SD card

Compact, light, removable storage media. For details see pages 72 to 75.

PictBridge

A standard specified by Camera & Imaging Products Association that allows you to connect PictBridge-complaint digital camera directly to the printer without a PC, enabling direct printing on the spot.

Thumbnails

Miniature images for representing the original images that are stored in the image files taken by a digital camera. The printer uses thumbnails in the image list.

Superimpose characters glossary

You can use the characters here to superimpose onto an image. Please take a picture of the desired characters in advance, and follow the procedures for superimposing handwriting in pages 23 and 24 to trim the necessary portion and superimpose it onto an image.

Happy New Year!

Seasons Greetings

Happy Holidays

Thank You!

Happy Birthday

Happy New Year!

Seasons Greetings

Happy Holidays

Thank You!

Happy Birthday

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Printed using VOC (Volatile Organic Compound)-free vegetable oil based ink.

Sony Corporation Printed in China